



DEPARTMENT OF EDUCATION,
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WORKPLACE LEARNING DURING COVID- PANDEMIC: EXPERIENCES, CHALLENGES & POSSIBLE SOLUTIONS

A Case Study of a Public Transport Company

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Abstract

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Background & Purpose: The learning context of a public transport company that shifted to remote work during the Covid-19 pandemic has been researched. The aim was to explore employees' experiences and their needs concerning organizational settings for workplace learning. Through this, organizational barriers to learning and helpful learning practices could be identified to better understand learning in remote work contexts.

Theory: Informed by Billett's conceptualization of workplace learning as the dialectic relationship between the circumstances of the social environment (*workplace affordances*) and the learners' actions (*learner agency*). Further, the framework of Communities of Practice by Lave and Wenger has been applied to conceptualize learning in the organizational context.

Method: The research design was based on a case study, including three virtual focus groups with employees of the company (n=11). These employees have been working in a remote work setting during the pandemic and participated in a new digital, semi-informal, and self-directed learning practice (Working Out Loud).

Results: The results show that the switch to a remote work setting created challenges and opportunities for workplace learning. On the one hand, social interaction was hindered and led to more barriers to engage in learning practices. Furthermore, the need to self-manage one's work and learning increased because new routines and processes had to be established. On the other hand, employees experienced more freedom in scheduling their time and trying out new learning practices. Digital learning practices, such as the semi-informal method of Working Out Loud, supported the workplace learning by providing a structured framework for learning and by making it easier to set aside learning time. The new learning practice encouraged meta-reflection about one's own learning goals and increased self-directedness. Moreover, it opened opportunities to discuss which practices are perceived as valuable and can support a more transparent learning culture.

Foreword

I would like to thank everyone who walked parts of this journey together with me and had an open ear to listen to my ideas, thoughts, and struggles. Special thanks to my supervisor Hadil who steered me safely through the adventure of writing a master thesis. Moreover, I would like to thank the company that provided the case for this study and some financial support for letting me conduct my research – and, in particular, its employees who enthusiastically participated in the focus groups. Finally, thanks to my study group without whom I would not have finished this thesis.

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I. Lists of Abbreviations & Figures

List of Abbreviations

Abbreviation	Meaning
WOL	Working Out Loud
WPL	Workplace learning
SDL	Self-directed learning
CoP	Community of Practice
LMS	Learning Management System

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1. Introduction

The Covid-pandemic that started in 2019 and is still ongoing during the writing process of this thesis has posed a challenge for many aspects of human life – ranging from overloaded healthcare systems to collapsing worldwide supply chains (Dany-Knedlik, 2021). The effects are visible at the global level as well as in the impact on each individual. Workplaces are one context where the individual and global consequences of the pandemic intersect. Many organizations switched to a full remote work setting by the beginning of 2020 – deeply affecting work practices and ways of communication. In Germany, a policy put forward by the Ministry of Labour legally advised companies to send those employees who can work from home to remote work to protect themselves and reduce the spread of the virus (BMAS, 2021). This led to around 30% of all employees in Germany working from home – compared to 4% before the pandemic (Statista, 2022). Since it is expected that around two-thirds of them will continue working from home or in a hybrid context (Statista, 2021), the learnings from the pandemic will inform future remote work practices.

To face the ever-changing workplace requirements and transformation of work practices, employees and organizations need to constantly learn and re-adapt (Billett & Choy, 2013). Learning strategies that are already effectively put in place can provide the guidance and stability necessary to face the ongoing societal and economic challenges (ibid.). Thus, it is suggested that the relevance of learning in workplaces gathered momentum during the pandemic and working-from-home policies because new learning strategies to adapt to the transformed setting had to be developed (Kshirsagar et al., 2021).

For workplace learning (WPL), this also means taking into consideration the organizational barriers to learning instead of studying the individual learner only (Ellaway, 2019). Within the literature, WPL has been conceptualized as happening in the field of tension between the contextual setting of an organization and the individual practices and motivations of the learner (Billett, 2001). A learner can work with and push the opportunities afforded by the company, while the company's norms and constraints make different learning practices possible. Thus, recent research on remote learning practices studies challenges and solutions for learning on organizational and employee levels (see Margaryan, Boursinou, Lukic, & Zwart, 2015; Vähäsantanen & Eteläpelto, 2018).

This thesis will provide a case study of learning in a remote work setting during the Covid-pandemic. The organization under study is a public transport company in Germany that switched to remote work at the start of the pandemic and has tested a semi-informal, and self-directed learning practice in this remote work context. The learning practice is called Working Out Loud (WOL) and is a form of networked learning in a peer group that is facilitated by a text-based learning guide. Based on this case, the study aims to describe the employees' experiences and their needs concerning organizational settings for learning during remote work. Furthermore, it aims to investigate how new learning practices might enhance the learning environment. The purpose of the study is to contribute a better understanding of WPL and the challenges for the employees and organizations – especially in a remote work setting. Thus, the research questions guiding this study are:

1. What are employees' experiences with workplace learning in a remote work setting?
2. How can digital, self-directed, and semi-informal learning practices, such as Working Out Loud, help support the workplace learning?

2. Literature overview

The following literature review will provide an overview of the concepts used in this thesis from existing academic literature. Moreover, similar studies that have already been conducted will be presented and put into relation to this research project. First, the transformed work practices and their impact on learning at the workplace will be laid out. Then, the basic concepts related to workplace learning will be discussed. After, challenges with workplace learning on an individual and organizational level are brought up. Finally, the topic of learning practices, especially digital and self-directed ones, will be presented.

2.1. Transformed work practices

Work practices are constantly evolving along with the social and technological developments in the workplace, but certain events can be considered catalysts for transformations in work practices. One of those moments, it is suggested, is the Covid-19 pandemic and its impact on work settings. In Germany, a 'work-from-home' directive was legally introduced at the beginning of 2021. This directive, put forward by the Ministry of Labour, advises employers to send employees who can work from home (mainly office workers) to remote work in order to protect them and reduce the spread of Covid-19 (BMAS, 2021). This unprecedented intervention into the work setting resulted in a sudden change to full-remote and digital work for many companies, which have not facilitated home office before, over an extended period of time. How long the switch to remote work will last was unknown and led to a context of huge uncertainty for managers and employees, which made decision making hard (Rutter et al., 2020).

The long-term impact of this abrupt change of work setting on digitalization and collaboration is still to be explored. However, work practices like online meetings or digital collaboration tools that mediate social interaction at work were implemented rapidly (Aroles, Mitev, & de Vaujany, 2019). The switch to remote work affected many employees' work twofold: in their ways of working (e.g., online meetings, chat clients) but also in the content and context of their actual work (e.g., developing online workshops) (Vähäsantanen & Eteläpelto, 2018). Yeo and Li (2022) found that there is a difference between employees that were forced into a work from home setting (for example, by the pandemic) and those who work in a planned remote context. Those finding themselves unplanned in home office had difficulties to adapt, had stronger emotions about it and needed to implement new work-life-boundaries (ibid.).

The digital transition challenged former work practices which may no longer be useful in a remote work context and accelerated the emergence of new one, highlighting the strong relationship between people and technology in workplaces (Vallo Hult & Byström, 2021). While digital practices like collaborating in a cloud document have usually existed before, the pandemic may have shown the relevance of those practices in an increasingly digitalized work context.

Vallo Hult and Byström (2021) state that workplace transformation and the employee's individual learning co-occur and are interdependent so that new challenges for learning emerge from the digitalized

workplace. For example, skills that are beneficial to handle the uncertain and digitalized work context are self-leadership and awareness of the blended professional and private nature of technology (Vallo Hult & Byström, 2021). Along the same line, Vähäsantanen and Eteläpelto (2018) found that new work practices require employees' creativity, continuous development of expertise, and the ability to change perspectives. Similarly, Ellinger (2004) concluded that the need for self-directed learning (SDL), which means to plan and carry out one's own learning, will increase when more digital learning practices can be afforded by the workplace.

2.2. Workplace learning

WPL has been conceptualized from various disciplinary backgrounds, such as Learning Sciences or Management Studies, leading to different approaches (Manuti, Pastore, Scardigno, Giancaspro, & Morciano, 2015). To start with, 'the workplace' can be understood as more than a physical location, an office, or a place of work but, as Manuti et al. (2015) suggest, as shared conceptions of the people who work together. These include shared meanings, ideas, behaviours, and attitudes (Manuti et al., 2015). Therefore, a 'workplace' is more of a social context than a physical location. WPL, then, is the process of learning that happens on an individual, group, and organizational level in this social context.

Workplaces are legitimate learning environments – in everyday work practices and guided learning opportunities (Billett, 2000, 2001). As learning environments, workplaces are neither unstructured (without frameworks) nor informal but, often, highly institutionalized (Billett, 2004). There are hierarchies, organizational structures, and implicit norms and practices regulating learning. WPL is always linked to the work practices in place (Campbell & Evans, 2016), showing the important link between individual learning practices and the organizational context of the workplace.

Which forms of learning are possible or promoted in the specific workplace depends on the interactions between the offers that the workplace makes for learning (*affordances*) and the individual engagement of the employees (*learner agency*) (Billett, 2004). Or in other words: what learning practices do exist, and who is allowed to participate? The organizational context determines the 'readiness' of the workplace to support or inhibit learning (Billett, 2001). Influencing factors can be, for example, how hierarchical the workplace is organized or how much inter-disciplinary collaboration between teams exists. Moreover, technological infrastructures can create new learning opportunities, for example, by integrating work and learning practices in one comprehensive tool (Ley, 2020).

The concept of WPL, as suggested by Billett (2001), appears to be a good concept to think about learning in the workplace as an interplay between organizational barriers and affordances and employees' individual agency to engage in learning. Unlike professional learning, WPL is not concerned about one specific profession or 'learning for a career' (Billett, 2004). Instead, professional learning is what, ideally, happens when employees engage in workplace learning. Moreover, when studying WPL from a psychology perspective and regarding WPL as different learning behaviours that occur under specific circumstances, Rigolizzo (2018) found that organizational intervention (in the form of purposefully designed learning environments) is necessary so that the employee shows the desired learning behaviour.

Also the notion of organizational learning, which is often conceptualized as knowledge creation and sharing within one workplace, might not suffice to fully understand organizational learning environments. Rashman, Withers, and Hartley (2009), who studied organizational learning in the public sector, found that “only effective organizations can translate individual learning into organizational learning” (p.473), highlighting the strong connections between the different levels of where learning happens in the workplace. They concluded that there are only few explanations of how individual learning in the workplace contributes to more comprehensive organizational learning, most of them concerned with how individual knowledge can be made accessible for the whole organization.

Consequently, the study of WPL includes both – the study of individual learning practices and the context in which learning is happening. While the first one mainly derives from behaviouristic and psychological accounts of learning (see Rigolizzo, 2018), the study of how learning is shaped by the organizational context and constraints derives from sociocultural accounts (see Tikkanen & Nissinen, 2018). Several authors ask for shifting the focus from solely analyzing the learners with their knowledge, skills, and attitudes to extending studies of the workplace’s characteristics and the organizational conditions for learning (such as opportunities and challenges, job relations, how work is organized) (Billett & Choy; Ellaway, 2019; Reich et al., 2015; Vähäsantanen & Eteläpelto, 2018). Moreover, some scholars suggest focusing on WPL in its everyday practice and in specific workplaces to understand the specific challenges for learning (Manuti et al., 2015; Reich et al., 2015).

As the exploration of the different perspectives on learning in the workplace shows, the aims of WPL are at least twofold: the employee’s professional development (related or not related to the current role) and the knowledge flow within the company (Manuti et al., 2015). WPL can include both: the development of the company (in terms of innovation and effectiveness) and the development of the individual (skills and knowledge) (Manuti et al., 2015). The iterative character of learning practices in the workplace is meant to ensure its continuation and ability to respond to new challenges (Billett, 2004). Therefore, instead of framing the two aims of WPL as divergent, it can be suggested to see the potential link between personal and organizational development by focussing on the learning processes and outcomes.

Role of the employee

The role of the individual employee in WPL can be seen as a conceptual counterpart to the workplace’s affordances and constraints. According to Ley (2020), the employee has three roles in the organization: a worker, a learner, and an expert of knowledge – all of which can exist on different levels from novice to expert. Rashman et al. (2009) suggest even more detailed roles of the individual learner: representative of a team, of the organization, part of a professional network, the role of a citizen or political representative. This variety of employee roles in the organization shows the complexity of WPL that goes beyond professional development only.

The agency of the learner, that is, the degree to which the employees are motivated to learn intentionally and can take meaningful actions on their own and shared work, is an essential prerequisite for WPL (Billett & Choy, 2013; Vähäsantanen & Eteläpelto, 2018). In their diverse roles, the employees hold power to shape workplace affordances: by pushing the existing boundaries and creating new opportunities, but also by disregarding certain learning practices (Billett, 2001). In their study of software engineers, Vähäsantanen and Eteläpelto (2018) found that factors that enhanced the learner

agency were democratic decision-taking, room for experimentation, self-directed development, and high autonomy of teams. If a learning opportunity is regarded as valuable and meaningful also depends on how far it aligns with the employee's values and the appropriate level of guidance (Billett, 2001). Consequently, the employees have an active role in shaping the organizational learning environment.

Bounded learner agency

Still, the extent to which the individuals can take charge of their learning and is invited to participate in learning activities is constrained by the workplace environment and social-demographic factors. 'Bounded Agency Models' assume that the learner is not free to exert her agency but that employees' engagement in learning is very much determined by the demographical, individual, and job-related characteristics (Billett & Choy, 2013; Tikkanen & Nissinen, 2018). How much employees are invited to participate in learning practices depends on the perception of their competence, their gender, race, work status, employment status, and personal relations in the workplace (Billett, 2001; Johansson & Abrahamsson, 2018; Manuti et al., 2015; Tikkanen & Nissinen, 2018). For example, it has been found that gender inequality in the workplace leads to women having restricted access to informal learning practices (Manuti et al., 2015) and, generally, less in-depth learning experiences (Johansson & Abrahamsson, 2018). To overcome constraints of bounded agency, managers have been found to have an important role as facilitators for learning; they support the self-efficacy and confidence of their employees as competent learners (Campbell & Evans, 2016). Moreover, to overcome the inequality in access to learning practices, the management should consider implementing learning-rich forms of work for employees at all levels and ages (Tikkanen & Nissinen, 2018).

2.2.1. Challenges for workplace learning

As with any kind of learning, WPL has been found to face certain challenges that need to be overcome to ensure a good learning experience. The transformed work practices during the pandemic might have stressed some of these challenges. Generally, and for a better overview, the experiences and challenges with WPL will be presented along the aspects on the individual level and on the organizational level.

Challenges on the individual level

Followingly, the findings in existing literature on the experiences and challenges of employees with WPL will be presented. What has been outlined is that the transformed work practices in remote work can lead to the feeling of isolation for the employees, to an increased responsibility to prioritize learning, and to a lack of immediate feedback.

Isolated learning in transformed work practices

Working from home in a remote setting might create a feeling of non-connectedness to the actual workplace and usually embedded work practices. A study conducted in Italy during the Covid-pandemic found that the feeling of social isolation decreased the remote work satisfaction, with the concerns about the ongoing pandemic being a main reason for feeling isolated from colleagues and the workplace (Toscano & Zappalà, 2020). On the one hand, a study by Reich et al. (2015) states that new work situations and challenges might help the WPL because the employees have to reflect on existing knowledge and practices. On the other hand, Tikkanen and Nissinen (2018) found that employees with 'learning-poor-jobs' might be exposed to even less learning opportunities in a remote work setting.

The two studies exemplify that those factors which determine the participation in WPL – like income, skill-use at work, work sector, or gender – might be even more relevant when it comes to remote work settings. The lack of learning-stimulating and embedded work tasks can encourage some employees to creatively approach the new situation and deal with the complexity (Reich et al., 2015), while others might lose interest in learning and, eventually, resign (Tikkanen & Nissinen, 2018).

Responsibility to prioritize learning

In the remote work setting, which requires a high level of self-organization, the employees need to prioritize learning and make time for it (Vähäsantanen & Eteläpelto, 2018). At the same time, they might have to deal with uncertain work contexts and possible intensification. Rigolizzo (2018) found that one challenge for learning in the workplace was the original work that the employees had to do and the need to prioritize learning higher than the original work. In the same line, in their study of software engineers, Vähäsantanen and Eteläpelto (2018) found that lower pressure in terms of efficiency provides the employee with room and time to learn. Other identified challenges were restricted freedom in time management and the lack of a learning directive (ibid.). The competence to be able to operate in great ambiguity and “[...] ill-defined, non-hierarchical environments” (Littlejohn, Milligan, & Margaryan, 2012, p. 227) is a trait that the changing work practices highlight, where work is often distributed over physical locations and calls for new forms of collaboration in diverse teams. At the same time, to foster sustainable learning practices, not all responsibility should be put on the individual employee (Rigolizzo, 2018).

Lack of feedback

Another challenge for the employee to engage in WPL has been identified as the lack of feedback on the learning progress (Vähäsantanen & Eteläpelto, 2018). In order to continuously engage in learning practices, the employee needs to receive feedback and be allowed to fail in her learning activities (Campbell & Evans, 2016; Rigolizzo, 2018). Feedback can originate from various sources and in different forms, but more institutionalized forms of feedback help direct the employee in her learning journey and build confidence (Vähäsantanen & Eteläpelto, 2018). Further, short-term feedback can help dismiss non-helpful learning practices and encourage a culture of risk-taking and failure among employees (ibid.).

Challenges on an organizational level

After summarizing the challenges for the individual learners, in the following sub-chapter the challenges on the organizational level that came up in literature will be illuminated. So far, the organizational challenges for learning that have been identified in the reviewed literature are the misconception of learning as an individual process, the implementation of ‘one-fits-all’ learning practices for all employees, and the neglect of considering organizational barriers to learning.

Regarding learning as an individual process

In his conceptualization of WPL as the workplace affordances, Billett (2001) suggests improving the learning experience by encouraging the participation of learners and mentors. Thus, the work environment should be designed to invite those seeking new learning opportunities as well as those offering learning opportunities alike. He also brings up the point that learning mentors might be purposefully chosen from among the employees. Moreover, peer learning (learning with and from members of a community) and multimodal learning settings (referring to different learning styles, for instance synchronous and asynchronous) are helpful in creating a natural and meaningful learning experience for the employees (Billett & Choy, 2013).

From an organizational perspective focus might be put on employee-centric instead of technocentric learning experiences. With technology becoming a substantial part of work practices, it has come to be recognized that the role that technology can play for learning has often been overrated (Vallo Hult & Byström, 2021). Rather, those new work practices demand new relationships between the employees and the insight that there is no ‘all-knowing’ expert in finding suitable approaches to learning. In the same line, Campbell and Evans (2016) found that to overcome the contrast between the individual learning needs of the employee and the learning opportunities offered by the organization it might be beneficial to re-focus on work-integrated learning practices and making learning processes inter-hierarchically transparent.

The revelation that challenges for WPL learning are often a problem of organizational culture also highlights the constrained employees’ agency and the need to approach the issue from a management and culture perspective (Vallo Hult & Byström, 2021). Adapted forms of leadership and organizational strategies are necessary to cope with the new roles and responsibilities of the employee and encourage the learner agency (Vähäsantanen & Eteläpelto, 2018; Vallo Hult & Byström, 2021). A shared vision for learning and learning-promoting work structures are important to avoid frustration on the employees’ side and overcome the workplace’s challenges (Vähäsantanen & Eteläpelto, 2018; Vallo Hult & Byström, 2021).

Implementing ‘one-fits-all’ approaches

Even though a shared vision and a joint learning structure are an important organizational prerequisite, it should be avoided to adopt ‘one-fits-all’ solutions for WPL. Those solutions are often considered quick fixes to learning needs that are scalable and not resource-heavy. This will, first, limit the exploration of new forms of learning that might emerge from transformed work practices (Billett &

Choy, 2013), while, second, also conflict with the focus on employee-centric learning practices. The learning practices afforded by the organization should be effective for a diversity of employees with various professions and at different stages of their learning journey (Billett & Choy, 2013). Consequently, Billett (2001) suggests that specific learning curricula and practices within a company should be developed that fit the organizational and employees' values and needs.

Disregarding implicit organizational barriers

Many organizations aim to become learning organizations but struggle to encourage their employees to engage in more self-directed forms of learning, which is an important prerequisite for more knowledge flow (Ellaway, 2019). As Ellaway (2019) points out, one reason is that the boundaries set by the workplace context are fundamental barriers to self-directed and informal learning activities. For instance, a low appreciation for learning in the implicit corporate culture can affect the employees, who will not feel confident to make time for learning, even if it is stated as a goal in the company's strategy. Speaking of the bounded learner agency, Billett and Choy (2013) assert that the workplace characteristics (for example, implicit norms) need to allow the employees to enact their learner agency and challenge existing boundaries.

2.3. Learning practices in workplace learning

Different modes of WPL can be either incidental and informal learning (happening 'on-the-job'), intentional but non-formal learning (conscious and structured), or formal learning 'on' or 'off'-the-job (for example, in-house training) (Tynjala, 2008). WPL can take the form of informal and incidental learning but also purposeful and scaffolded learning practices (Billett, 2001). Different conceptualizations of WPL being defined as either formal or informal are discussed in literature (for example Manuti et al., 2015 or Billett, 2004). In this thesis, the distinction between formal, informal, and semi-informal learning is used to distinguish between learning that happens in either formal contexts (such as seminars), on-the-job (for example by learning about the technological tools), or in intentional and structured but still informal learning settings (such as structured learning practices without instructors).

It has already been stated that WPL includes various approaches to learning, formal and informal ones, guided by a mentor and self-exploring. Nonetheless, there are characteristics to practices in workplace learning that make up a *good* learning design. It is demanding to create a learning environment that is relevant and close to everyday work practices while challenging and meeting the diverse learning needs of employees. A good learning design (formal or semi-informal) should be actively engaging and motivating for the learner (Beetham, 2020). At the same time, it should build on existing skills and capabilities of the learner while challenging her to extend her knowledge (ibid.). To foster learning, an organization should attempt to make learning a 'safe space'(ibid.). Moreover, interactivity in the form of dialogue and feedback should be provided (Beetham, 2020). For adult learners in the workplace,

especially the aspects of personal relevance, active engagement, and transferability can be highlighted as those that have been found lacking in current WPL practices (Manuti, 2015).

Self-directed learning in workplace learning

A well-designed learning practice allows one to choose a goal relevant to one's personal aims, thereby increasing intrinsic motivation and purposeful learning (Beetham, 2020). Choosing an individual learning goal and initiating a suiting learning process falls under the term of self-directed learning (SDL). The goal of many WPL activities is to encourage the employees to take responsibility for "[...] planning, carrying out, and evaluating their own learning experiences" (Ellinger, 2004, p. 159).

The theoretical origin of SDL can be traced back to what Mezirow (1985) theorizes as transformative learning. He states that self-reflection on assumptions that are integrated into our worldview is a central function of adult learning in order to emancipate from more traditional forms of teacher-student learning (1985). This emancipation cannot happen when the learner is trapped in strictly hierarchical and repeating processes which deny the freedom to diagnose her own learning needs and formulate her own goals (Mezirow, 1985). Another conceptualization derives from Knowles (1975), who states: "In its broadest meaning, 'self-directed learning' describes a process in which individuals take the initiative, with or without the help of others, in diagnosing learning needs, formulating learning goals, identifying human and material resources for learning, choosing and implementing appropriate learning strategies, and evaluating learning outcomes" (as cited in Merriam & Baumgartner, 2020, p. 18). Distinct from the concept of *self-regulated* learning, SDL is usually based on intrinsic goals and motivation, designing the learning process, and reflecting on the learning (Merriam & Baumgartner, 2020). In different conceptualizations, SDL is regarded as a process (through the stages of forethought, performance, and self-reflection) and an ability of the individual learner (to conduct SDL) (Littlejohn et al., 2012).

Often, organizations attempt for the employees to become a knowledgeable-learners and take care of their professional development to align with organizational goals like increasing knowledge sharing, network building, and spending less money on formal training (Ellinger, 2004). It was even stated that "[...] the self-directed learner is the cornerstone of the learning organization" (Guglielmino & Guglielmino, 2001, as cited in Ellinger, 2004, p. 166).

That being said, it is crucial to consider that SDL does not only include individual approaches to learning but includes peer groups and networks as learning settings. Littlejohn et al. (2012) suggest that SDL should be understood as being embedded in the collaborative nature of WPL, as it is not an individual cognitive process but happening within the social context. They draw out three stages within the process: Forethought, performance, and self-reflection, which are all affected by the learning environment.

In order for SDL to be a helpful approach to learning, the affordances of the workplace have to allow for self-initialized and explored learning experiences. For example, by supporting employees who often feel unprepared and overwhelmed with managing their own learning (Ellinger, 2004). The workplace will benefit from more experienced adult learners, that can carry out self-directed learning practices. Focussing on the relation between SDL and technology in work settings, Littlejohn et al. (2012) found that little research has been done on SDL in informal learning practices and how technology might mediate and facilitate the SDL process. Their study showed that technology that facilitates network building can bridge the gap between individual and organisational knowledge (2012).

2.3.1. Digital, collective, and self-directed learning practices

Several researchers attempted to study how digital, collective, and self-directed learning practices might enhance WPL. In his research, Billett (2000) found that the efficacy of employees confronted with new tasks can be increased by guided learning practices that extend everyday work activities. Several studies in this field are based on the assumption that there is a need to understand guided learning practices beyond formal training (for example, Vallo Hult & Byström, 2021). In the following, studies on guided but self-directed learning practices and their findings will be described.

In their study of knowledge sharing in online networks in the workplace of ‘knowledge workers,’ Littlejohn et al. (2012) wanted to find out how enhancing the SDL and increasing knowledge creation can support WPL. They suggest a framework that guides the learner towards more self-directed practices and facilitates information sharing in workplace networks. The employees are encouraged to use these networks to reach their learning goals. The findings show that benefits for the employees were: increased skills in networking, a better status of the employee, reflection on personal learning goals, and more trust-based relationships between co-workers (Littlejohn et al., 2012). The benefits of the SDL practices for the company were the contribution of knowledge from the individual employees to the company’s networks and the mutual benefit of that now collective knowledge (Littlejohn et al., 2012).

In virtual settings with remote teams using a microblogging tool, Margaryan et al. (2015) set out to study what practical approach could support knowledge sharing and a sense of connectedness in virtual teams, which will contribute to a learning organization. They assumed that knowledge sharing would help build trust-based relations in the workplace and increase the feeling of connectedness, leading to higher motivation, better decision-making, and overall communication. The tool of choice was an Enterprise Social Network to connect the physically remote teams and allow for naturally emerging common interest communities. Noteworthy, sharing private interests and building communities around these were encouraged. Margaryan et al. (2015) found that the defining success criteria were the perceived ease of practicality (how easy is the tool to use) and perceived value (what do I get from it?), with the feedback on the latter being mixed. Identified barriers were the lack of interactivity, the willingness to share personal aspects of life with co-workers, and the non-participation of introverted employees (Margaryan et al., 2015). For future implementations of similar WPL practices, they suggest pointing out the value for the employees; appointing ‘curators’ who encourage engagement; using user profiles: integrating the tool into onboarding or professional learning practices; encouraging problem-based communication; and enabling tracking of interaction and reach (Margaryan et al., 2015).

A similar practice to the one study by Margaryan et al. (2015) is the learning method ‘Working Out Loud’ (WOL). This method also scaffolds self-directed and networked learning through peer group support. WOL is not a single learning activity, but it consists of different learning settings (individual, peer, networked learning) (Crump, 2017). A peer group, a WOL circle, with approximately five members, helps each member pursue her own learning goal and contribute their knowledge, network suggestions, and resources. WOL has been described as the combination of mindset and networking techniques (Stepper, 2015). WOL is a method to find purpose in work and speaks to one’s intrinsic motivation, therefore touching upon the psychological needs for competence, autonomy, and relatedness (Stepper, 2015). The WOL process can also be applied to non-organizational context (e.g. a peer group of locals). Rather, the goal is to make learning and knowledge sharing a personal habit (Stepper, 2015).

According to Stepper (2015), WOL can be broken down into five elements, which are interrelated and can be emphasized differently (see Fig. 1). First, ‘purposeful discovery’ describes a form of goal-oriented exploration of learning content, choosing a learning goal that is relevant to oneself. Second, building purposeful relationships will grant access to networks of knowledge, expertise, and influence. Third, the aspect of generosity aims to combine self-interest (to gain something from the network) with other-interest (what can I offer?). Fourth, WOL is based on making your work and efforts visible, for example, via corporate social networks or platforms like LinkedIn, to increase reputation, feedback, and efficiency through networks. Last, the fifth element of WOL is a ‘mindset of improvement,’ which contains the idea of increased self-efficacy and continuous development.

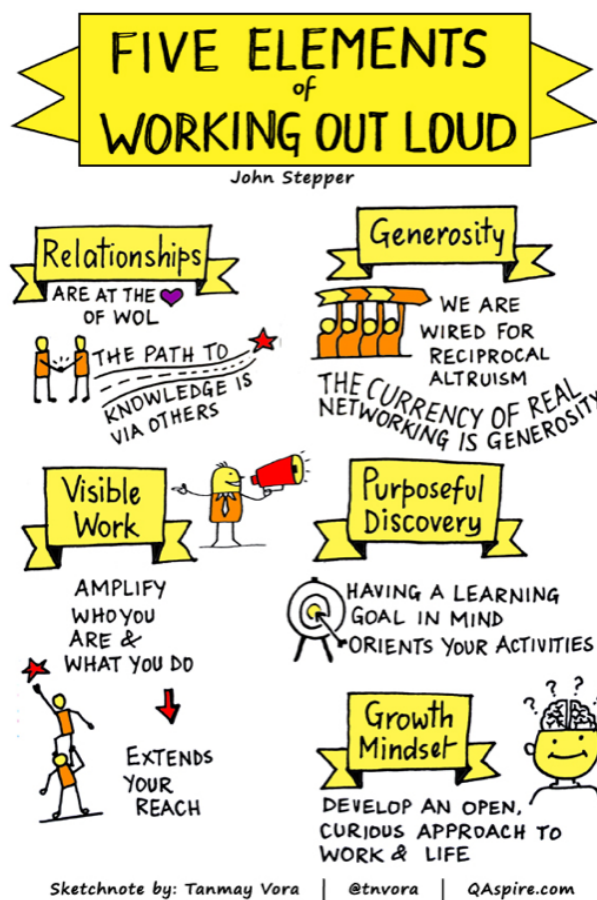


Fig. 1: Five Elements of Working Out Loud (Tanmay Vora, n.d.)

In her study of power relations between individuals and organizations within WOL practice, Crump (2017) found that WOL is an umbrella term for similar concepts of showcasing your work. Moreover, she suggests investigating WOL from a learning sciences perspective to study how the employees can reflect critically on their own and the company's learning goals (2017). Similar concepts, like ‘Narrating Your Work’ or ‘Observable Work,’ have been used in the aforementioned studies (for example, Margaryan et al., 2015), all serving the idea of making ‘invisible’ work from knowledge workers visible.

Concerning the effect on power relations between employees and the organization, Crump (2017) found that the WOL practice aligns the development and self-actualization goals of the employee with the realization of the company's business goals – pointing again at the diverging aims of WPL.

WPL is constantly evolving and placed in a field of tension between organizational, individual, and technological interests and needs. The overview of literature has shown that WPL is not only of empirical but also of practical interest, as organizations aim to facilitate learning practices for their employees to manage the ongoing change (for example, Littlejohn et al., 2012). The employees are faced with increasing responsibility to self-manage their work and learning, with digital learning practices as potential supporting structures. Especially the disruptive character of the Covid-19 pandemic had profound implications for how learning at the workplace – and work generally – is organized.

3. Empirical context

This study will look at the specific learning context of a public transport company in Germany. The company is part of a public transport association that offers various forms of mobility – such as subways, busses, shuttles, and autonomous vehicles. The company is a municipal company with around 6.000 employees, of which only around ten per cent are on-desk only professionals. The most significant part of the staff belongs to the bus and tram drivers, as well as technicians and other manual workers.

Looking back at its over 100-year history, the company has provided the city with basic public infrastructure and a stable mobility offer. With mobility being one of the most important topics in current societal discourses, like facing climate change and equality in access to public life, the conceptual understanding of public transport has transformed into ‘mobility as a service’, which is focused on the customers’ needs. Therefore, the company, which has historically grown structures, must develop its infrastructure and achieve new strategic goals related to national and international mobility politics. Consequently, the company’s employees, which cover a diverse range of professions – from engineering to marketing, customer service, or bus driver – stand under the demand to design new processes, projects, and initiatives to fulfil the rising demands. Employees bear much responsibility for having up-to-date knowledge in their profession, collaborating in cross-departmental projects, and taking an active role in the change process.

For this study, I have taken on a dual role as researcher and employee. Since the beginning of 2020, I have been working as a student in the Innovation and Change department of the company and, since 2022, as an official master’s student to write my thesis. My experience of the organizational setting provided me with an insider understanding of the company – its processes, culture, and people. Moreover, because I have been working on implementing WOL from the beginning, I could understand its origins and history in the company. Additionally, I had the chance to participate in WOL at the beginning of 2021 and thus, experienced the learning method myself, which made many of the participants experiences understandable. Most of the participants I knew in advance; some were immediate colleagues of mine, which facilitated building a rapport and an atmosphere of trust in the focus groups. It was stressed that my role was to collect data and not evaluate the participants' answers to avoid restrained answers.

The transformation of work & learning practices during Covid

The beginning of the Covid pandemic in early 2020 did not only affect the company in its core business – it led to a cut in daily passengers by almost 40% (VDV, 2022) – but it also affected the ways of working together and specific working tasks. The crisis highlighted the need for flexibility, embracing change processes, and providing employees with a feeling of social security and belonging.

Work practices and established processes changed because of the necessary digitalization of processes when office workers switched to a remote work setting in March 2020. New collaboration tools like Microsoft Teams were introduced and changed the collaboration in teams. Practices like online meetings and workshops, sharing documents and working with online planners were implemented. A new balance

between efficient and innovative work practices in the transformed setting had to be found, since no remote work practices were in place before.

Concerning learning practices, most of the already existing learning landscape switched to an online setting after a short time. This meant that former in-place seminars were now held via MS Teams and that more E-Learning content was offered to the employees. At the same time, employees had to learn many new skills and tools, with direct social interaction missing during lockdown times. Therefore, the employees' longing for a social form of learning emerged, resulting in experimenting with the new learning practice WOL. WOL as a new learning method was chosen because it has been applied in similar organisational contexts before and proven to be a successful method for personal development and organisational change (Boehne, 2019).

Existing learning landscape

The public transport company has its own Learning Management System (LMS), where employees can register for various learning offers. Learning opportunities include formal in-house training, for example, on process management or moderation techniques; a broad portfolio of e-learnings that function either as supplementary content to the formal training or as stand-alone courses; and finally, non-vocational training, which employees can participate in outside of their working hours.

Access to the formal training must be granted by the respective manager and the people development team. A guiding principle is the relevance of a chosen training to the employee's profession and everyday tasks. For office workers, a yearly budget for learning is allocated, which they can distribute on in-house or external seminars in consultation with their managers. Non-office workers can also participate in the seminars in their free time or read e-learnings but have limited access to non-vocational formal training that is not directly linked to their original profession. For example, a bus driver who aims to develop into manager role can be eligible to read specific e-learnings on leadership and participate in training but may not use the courses for project management offered in the LMS. On the other hand, office workers have unlimited access to e-learnings in their work time and can participate in various trainings, if coordinated with their manager. Thus, most of the learning offers focus on employees working in the office.

During the remote-work setting, in a bottom-up process emerging from employees who were interested in trying out a new learning method, the new learning practice of WOL has been developed. WOL is not a single learning activity but a twelve-week process where learners pursue their individual learning goals. In a peer group of four to five people, a circle, they meet weekly and work through pre-defined tasks that will help them achieve their goal. The learning settings vary from individual tasks to peer group feedback and methods of networked learning. Moreover, the WOL process was designed for a remote work setting and consequently placed in a technology saturated work environment. Specific digital resources that have been used should be highlighted because they have been intentionally build into the learning design (see Fig. 2).

Digital Resource	When	Activity	Why
WOL Circle Guides (pdf)	Weekly meetings	Inform, inspire	Scaffold the learning process, suggest methods, initialize discussion
MS Teams	Introduction workshop, weekly meetings, feedback workshop	Communicate (video & chat), feedback (quick reactions)	Promote interaction, social learning opportunities
Mural (Digital Whiteboard)	Introduction workshop, weekly meetings, feedback workshop	Collaborate, visualize, plan, present	Foster active engagement, produce visible output
Social Media (LinkedIn)	Individual weekly tasks, communication of project	Network, inspire, communicate	Reaching out, showing own competencies

Figure 2: Digital resources for WOL practice

The WOL process can be regarded as the scaffolding of self-directed and networked learning activities (Stepper, 2015). At the same time, WOL is also an approach to learning that values reaching out to networks of experts and asking for guidance in the self-directed learning process. The main distinction from similar learning practices in the workplace, for example, mentoring programs, is that the participants do not need to share a common learning goal. This implies they were free to choose non-vocational goals for their learning process, for which the professional network might still be useful (for instance, improving English skills). Nevertheless, only a few participants chose to do so.

The employees could sign up for an initial kick-off workshop where they learned everything about the WOL process (see Fig. 3) and reflect on their individual learning goals. Thereafter, employees were manually matched into their WOL circles of five participants by two criteria: available time slots and diversity of the circles. In the first circle meeting, the group had to organise the administrative side of the learning process (when to have meetings, which will facilitate the meetings, which tools to work with) and decide on their individual learning goal. The peers contribute to the learning goal throughout the following weeks with their knowledge, suggestions for networks, and resources. Thus, the employees participating in WOL take on different roles, that of a learner (novice) and that of a sparring partner and source of knowledge (expert). In the end, the goal is to achieve the individual learning goal and internalize the self-directed learning methods and suggestions for networking provided by the WOL process and be able to transfer these into everyday work practices.

In the middle and at the end of each WOL round, feedback was gathered from the Innovation and Change department to improve the learning experience for the employees before handing it over to the People Development team. The feedback focussed on: What skills did I learn from the WOL process? What did I like most about it? What challenges did I face so far? When designing the practice, a central objective was to create a learning practice that fits into the existing learning landscape of the organization. At the

same time, the practice should be adaptable to the learners' needs and non-mandatory, thus the semi-informal character. Participating in the WOL process was not considered working time in the project's pilot stage, and employees had to make time for it in their weekly schedule over the twelve weeks. Hence, only office workers with everyday access to digital resources like MS Teams and flexibility in scheduling their work could participate. For this thesis, WOL will provide an example of a digital, self-directed, and collective learning practice, and a closer look will be taken at its contribution to the workplace's learning environment.

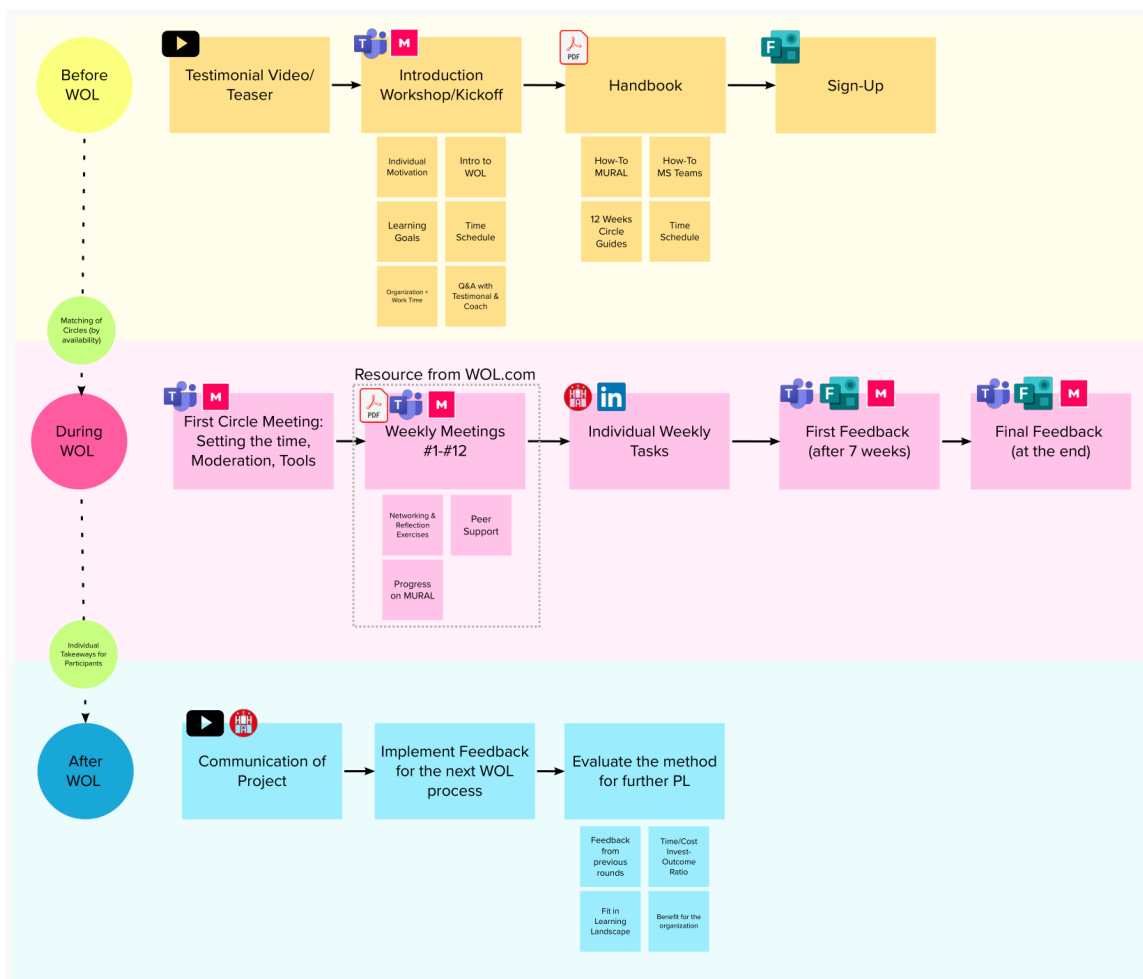


Figure 3: Working Out Loud process

The empirical context in the public transport company provided an opportunity to study how employees experienced learning in a remote work setting and to examine what learning practices like WOL can contribute to the existing learning environment. Another motivation for this study is the host company's goal to become a 'learning organization' to cope with the ongoing change, putting the focus on professional development and the company's knowledge management. There is not much research on the specific contexts of WPL in remote work settings and a need to understand the organizational constraints for learning as well as the employees' experiences and needs to derive appropriate learning practices from it.

4. Key theoretical concepts

In the following, the key concepts that inform this thesis and the analysis of the data will be presented. The theoretical approach that has been taken will be explained, and definitions for the various theoretical concepts and how they interrelate will be provided. For an overview, see Figure 4.

Theoretical framework

Socio-cultural approaches inform the theoretical understanding of learning in this thesis project. In these, learning is conceptualized as being situated in social practices (Greeno, Collins, & Resnick, 1996). The situated character of learning implies that the learner is shaped by the environment she is settled in and that she shapes the environment through her learning practices (for example, the learning environment can be shaped by technology) (Lave & Wenger, 1991). Learning happens in everyday life and through engaging in social interaction (for instance, in a meeting with co-workers). This notion highlights the dynamic character of learning as engaging in practices rather than passive absorption of knowledge. The goal of learning in the socio-cultural understanding is to become a mature member of a Community of Practice (CoP) (Lave & Wenger, 1991).

Based on this situated understanding of learning processes, the narrower concept underlying the analytical framework of this thesis is the theory of workplace learning, which Stephen Billett has significantly shaped (2001). The benefit of choosing Billett's theory of WPL is to bring more depth to the approach of situated learning by Lave and Wenger, because it is specifically adapted for workplace learning environments. Thus, it brings up theoretical concepts that are built upon the socio-cultural understanding of learning but applied to the working context (like the one brought up in the case study).

Workplace learning means learning through and for work, where workplaces as social constructs are legitimate learning environments (Billett, 2001). Billett's conceptualization of WPL builds on Lave and Wenger by describing the dialectic relationship between the circumstances of the social environment (*workplace affordances*) and the actions of the learners (*learner agency*). The theory of WPL and its conceptual distinction of learning on the organizational level and individual level builds the framework for the following analysis of the challenges in a remote work setting.

Theoretical concept

Mainly, four theoretical concepts have been relevant for this work: the idea of communities of practice as social learning environments; the conceptualizations of workplaces affordances and learner agency for learning; and, finally, the notion of guided participatory practices.

Lave and Wenger (1991) proposed the idea of these CoPs as authentic and legitimate learning environments, where social interaction with other members of the community is the key to learning. CoPs are influenced by the social, organizational, and cultural context they are placed in and the setting of their social interactions (e.g., networks or partnerships) (Reich et al., 2015). Engaging in a CoP through participating in its practices allows the employee to move closer to the centre of the community (Billett, 2004; Lave & Wenger, 1991). Throughout the learning process, the employee moves from a

novice role to becoming an expert in a particular CoP. Thus, learning is valued and vital for the continuation of the community (Lave & Wenger, 1991).

CoPs being applied to this study mean that the company's employees can be considered members of various communities. For example, they can be seen as part of one big CoP defined by the organizational frame in which they interact and their contribution to the continuation of the company through their professional and learning practices (Billett, 2004; Lave & Wenger, 1991). In other words, their engagement in learning practices makes sure that they have skills to help the company's success in the future. Moreover, the participants of WOL and their respective circles can be considered temporary CoPs. In their peer group character, this CoP is brought together by the common goal to engage in the learning practice.

Billett explains that the organizational context determines the 'readiness' of the workplace to support or inhibit learning (2001). Influencing factors can be, for example, the hierarchical structure of the workplace, the existence of interdisciplinary teams, or the opportunity for self-management of employees. Consequently, the workplace context determines the quality and quantity of learning opportunities. The readiness of the workplace to support learning opportunities impacts the learner agency, for instance, by evaluating the importance of factors like job status, hierarchical position, age, or gender (Billett, 2001). Since this thesis aims to explore the experiences and challenges for WPL during remote work, the analysis of the workplace's readiness to provide opportunities is necessary.

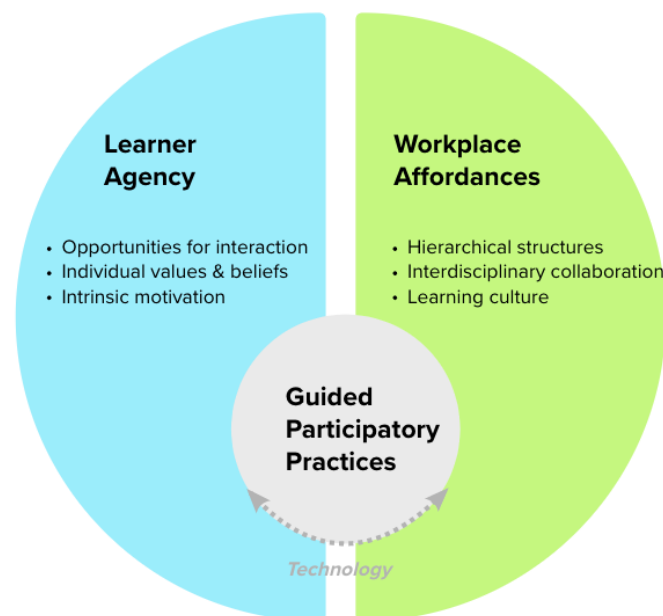


Figure 4: Theoretical concepts of WPL and possible influencing factors (adapted from Billett, 2001)

Another concept is Billett's definition of learner agency and how the workplace's constraints hinder full agency. Generally, the learner agency refers to the extent to which the employees are motivated to engage in learning opportunities, their individual values, and beliefs – with a high degree of agency leading to

more apparent learning activities (Billett, 2001). Thus, the intrinsic motivation to become a mature member of a community, form interpersonal relations and develop an identity within a CoP is a driving factor for the learner's agency (Billett, 2001). In a stimulating learning environment (a ready workplace), the learner has many opportunities to engage in goal-directed learning practices (Billett, 2001). The concept helps to analyse motivating and demotivating factors to participate in learning in this study and takes into account the individual agency of the learners to shape the learning environment.

Based on workplace affordances and learner agency, guided participatory practices build the conceptual link between the needs of the workplace and those of the learners (Billett, 2004). The guided participatory practices are part of the learning opportunities in a workplace (besides informal and spontaneous ones). They are structured and intentional – shaped by both the interests of the workplace and the engagement of the individual (Billett, 2004). Workplace learning practices exist as a 'learning curriculum' in the company to ensure the ongoing existence of certain practices. The employee, then, learns through participating in those learning opportunities (for example, to reach career goals). Consequently, it is interesting to regard the WOL learning practice as a form of guided participatory practice to explore the interdependency between the offers of the workplace and the individual engagement.

5. Methodology

The questions guiding this study were: What are employees' experiences with workplace learning in a remote work setting? And how can learning practices like Working Out Loud support the workplace learning? In the following, the methodological approach that was taken to investigate these questions will be explained in detail, including a description of the research design, the methods used to collect and analyse data, and ethical considerations.

5.1. Research design

The chosen research design for this thesis project has been a case study (see Fig. 4). Case studies contribute to the understanding of specific contexts of learning and offer the opportunity to combine several data gathering methods like document analysis and interviews (Fischer, Hmelo-Silver, Goldman, & Reimann, 2018). The benefit of this research design is to get in-depth knowledge of the specific case and understand the learning phenomena at hand. Another reason for choosing a case study is to address the opportunities and challenges of both the individual learner and the workplace (Reich et al., 2015).

To make a case study design transparent, Thomas (2011) suggests defining the following elements: the subject, the object, the purpose, the analytical approach, and the study process. The subjects of this case are the employees of a public transport company who have been working in a remote work setting for the last two years due to the Covid restrictions in place. The object, then, are the experiences they made with learning during remote work and the learning practice WOL. The analytical perspective taken is that of Billett's (2001) concept of WPL as the result of workplace constraints and learners' agency.

5.2. Data collection & analysis

Three virtual focus groups with three to four employees each were conducted to explore their experiences and lived-through realities over the past two years. Focus groups were chosen as a method to facilitate discussion among participants on a similar level of detail about their experiences. Following topics were explored in the focus groups: the various experiences that employees made and their needs for a good learning environment; and how they think practices like WOL can enhance the learning (see Appendix 1).

The method served the purpose of exploring the employees' realities and perceptions to find out about their experiences with WPL in a remote work setting. In contrast to more structured group interviews, focus groups are mainly a discussion platform for the participants and are not strictly moderated by the researcher (Thomas, 2017). While the researcher should not control, other factors that affect the group interaction like hierarchies, group dynamics, and interpersonal relations might exist (Bloor, 2001). On

the other hand, participants are likely to feel more comfortable in a group of co-workers with whom they have a good rapport, leading to more open and honest answers (Bloor, 2001).

Participant sampling

For employees to be eligible to participate in the study, they had to meet certain inclusion criteria. The employees should have worked in a remote work setting for at least parts of the last two years, which led to focussing on office workers because they experienced a considerable change in their work practices in the switch from on-site to remote work. Moreover, they should have high flexibility in scheduling their time and work tasks so that participating in learning was possible. The third criterion was to have participated in the newly introduced digital learning practice of WOL. This criterion helped to explore their experiences with WPL and WOL as a learning practice specifically. Hence, it could be assumed that all participants had some intrinsic motivation to engage in learning activities.

Name	Gender	Department/Role
Mo	Man	Sales
Ilka	Women	Traffic Planning
Thorben	Man	Technician
Sara	Women	Engineering
Caro	Women	Marketing
Regina	Women	Innovation
Steven	Man	Human Resources
Karen	Women	Innovation
Christoph	Man	Innovation
Arne	Man	Technician
Ina	Women	Sales

Figure 5: Overview of participants (anonymized)

Eleven participants took part in the three focus groups that have been conducted (see Fig. 5). The participants varied gender with five men and six women participating. They came from eight different departments, for example, marketing, civil engineering, and human resources. Their job positions varied from clerks to mid-management positions. Thus, in terms of sample variation a diversity of the participants concerning gender, age, professional background, and position within the company existed.

A convenience sampling approach was used: every employee who had participated in the WOL process within the last two years was contacted via e-mail (n=35) (see Fig. 6). They were invited to participate in the master thesis project and join a focus group. Information was provided about the field of research, the topic and why they were chosen as possible participants. Moreover, they had the chance to contact me with questions or concerns. Those who responded were then asked to state suitable time windows for the focus groups and, followingly, were invited to participate. There were no no-shows and only one cancellation for all focus groups.



Figure 6: Sampling strategy

The sampling resulted in the aspired three focus groups with four participants each. One participant had to cancel, leading to a sample size of eleven employees. Bloor (2001) recommends that the size of a focus group varies between six to eight participants. From prior experience with online workshops, I decided to limit the number of participants per group to a maximum of four people in order to get more input from each one and encourage discussion. Moreover, the reason to do focus groups rather than one-to-one interviews was motivated by assuming that participants will find common ground for discussion as a group and share their experiences with the WOL method.

Conduction of focus groups

The focus groups were conducted in a virtual setting using MS Teams and the digital whiteboard tool MURAL. These tools were already existing technical infrastructure and thus familiar to the participants. Each focus group was scheduled for 60 minutes and recorded (audio and video were recorded as a default via MS Teams but only the audio used for later analysis). An assistant moderator was there helping me facilitate the focus groups, taking on tasks such as time-boxing and note-taking (Thomas, 2017). My role as a researcher was to prepare the focus group beforehand and facilitate the meeting, not to lead the discussion or direct the participants in the 'right' direction (Bloor, 2001; Thomas, 2017).

At the beginning of the meeting, the agenda was presented, a quick overview of the research topic was given, and the different roles were defined. After the introduction, the recording started, and I posed the first question for discussion. The questions followed a semi-structured interview guideline that touched upon the key concepts relevant to the research questions (see Appendix 1). A digital whiteboard (see Fig. 7), which was shared with the participants, was used to keep track of the discussion and to be able to reference previously mentioned arguments. The assistant moderator's task was to write down the main points of discussion and share the screen. At the end of the meeting, the participants were informed

about the next steps (data analysis, writing process). They had the opportunity to debrief with me (Bloor, 2001).

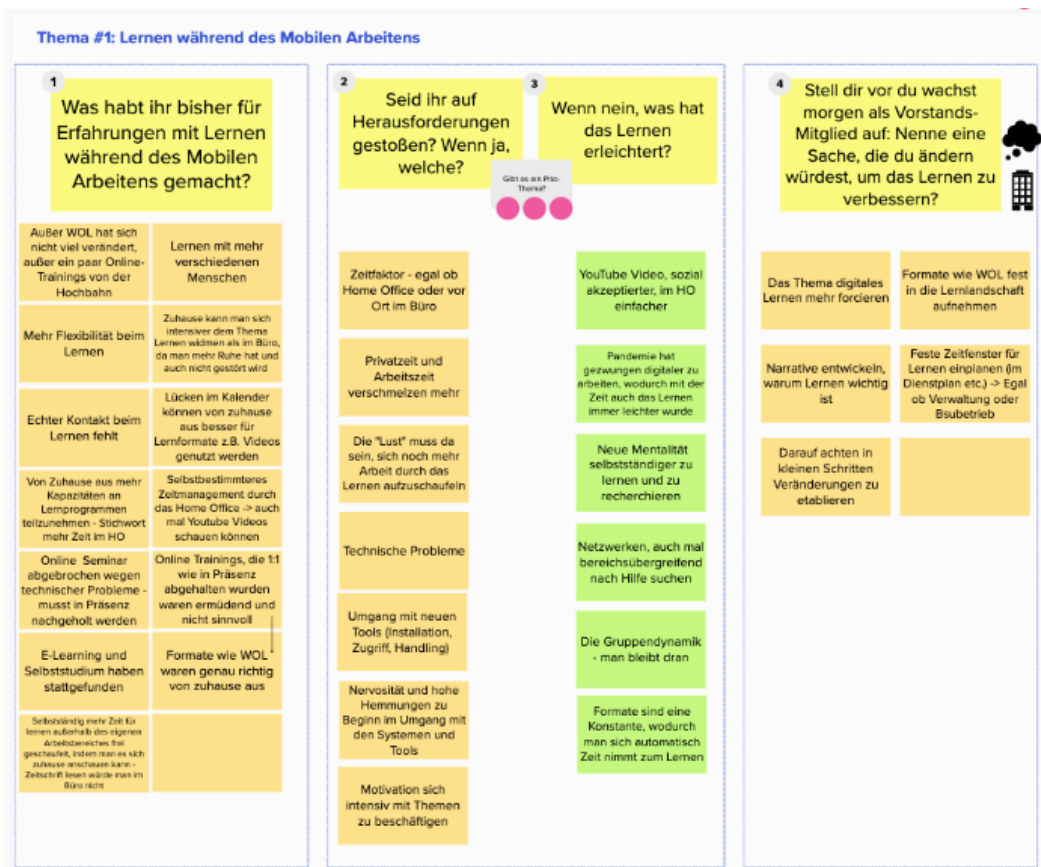


Figure 7: Excerpt from digital whiteboard

Thematic data analysis

The analysis approach was guided by inductive thematic analysis to explore emerging themes in the data collected from the focus groups. The goal was to discover patterns and ‘see what is in the data’ instead of squeezing the data into predefined topics. Thematic analysis was suitable for this research because a description of the learning environment and practices was attempted rather than the development of theoretical approaches (Vaismoradi & Snelgrove, 2019).

As a first step, the focus groups were transcribed verbatim using the transcription tool *Trint* from recording (audio only) into text. To protect the participants’ identity, all data has been anonymized and the uploaded files deleted after transcriptions. Transcripts are necessary so that the following analysis will not be biased (i.e., selective), and none of the rich data is lost (Bloor, 2001). I started by open coding the transcripts of all three focus groups into cluster (for example, remarks about the experiences with WOL into categories like ‘provides a framework’). After the data had been clustered for analysis, codes were used to index the surface aspects of the data “[...] with the aim of developing a taxonomy for identifying relationships between pieces of data” (Vaismoradi & Snelgrove, 2019, p. 4). The coding was done in an iterative process to check for underlying meanings, find patterns, and, finally, develop themes (Vaismoradi & Snelgrove, 2019). The qualitative analysis tool ‘Nvivo’ was used for coding and to keep

track of the codes for further investigation. In this analysis phase, a translation from the German transcripts to English codes took place. In thematic analysis, the discovery of often implicit themes and patterns can be considered the final result of the analytical process (Vaismoradi & Snelgrove, 2019).

For the thematic analysis, topics that have been emphasised during the focus groups (for example, by spending a lot of discussion time on them or being repeatedly mentioned) were highlighted and then browsed for underlying themes. The themes that have been identified from the focus groups were then contextualised in the understanding of the case study and put into the theoretical frame of this research project. Thus, the themes are careful interpretations of the collected and analysed data.

5.3. Ethical considerations

The study conducted for this thesis aligned with the ethical guidelines such as respect for the persons, beneficence, and justice for the participants (Franzke, Bechmann, Zimmer, & Ess, 2020). The study has been conducted under the imperative to protect the people participating or being impacted by the study. For instance, issues on the ethical expectations deriving from the setting of the study or the possible risk for research participants have been considered before deciding on the research design (Franzke et al., 2020). For example, participants might expect that the ideas for the improvement of the learning landscape they provided will be operationalized. Or if members of the people development team might take some of the insights as criticism.

Another consideration was the character of the partnership between the corporate setting and academia. Since I have been working in the company under study, a dual role as researcher and employee existed. This circumstance implied relationships on the institutional as well as personal level, which might have affected the research (Locatelli, 2019). Moreover, there can be conflicting interests between the research goal and the company's aims, such as data access or funding (Locatelli, 2019). I have not experienced such tensions and the ethical guidelines and academic principles were followed.

For the participants, the study process has been made transparent, and the protection of their personal integrity and privacy (through anonymization and data protection) was emphasised. A hands-on issue was to get the informed consent of participants in a remote setting. The solution was to inform the participants about the background of the study, its aim, the expected time investment, and the data disclosure before asking for consent via MS Forms. Another issue was the transcription of the audio file through *Trint*. Since the data had to be send to a third-party sever, a leak of data might have been possible. Thus, I deleted the recording from the application's database right after the automatic transcription was completed. Throughout the contact with the participants, I tried to make the research process as transparent as possible and valued their time investment in the research. Regarding confidentiality, the participants were assured of the confident nature of everything that came up during the group interviews and in the subsequent data analysis; thus, the company could not retrace each participant's statements (Bloor, 2001).

6. Findings

In the following chapter, the themes that emerged during the analysis of the focus groups will be presented in relation to the two research questions guiding this study. The thematic analysis of the focus groups led to the identification of seven underlying topics (themes), which will be reported in detail in this chapter. A simplified summary of the results can be seen in Figure 8.

6.1. Findings on employees' experiences with workplace learning during remote work (RQ1)

This sub-chapter summarizes what the participants of the focus groups stated on their experiences with remote work in the past two years and how it affected their work practices, learning needs, and strategies. In particular, it will lay out how employees have reported to re-evaluate their definition of workplace learning, how they perceived an increased need for self-management, and what kind of specific challenges derived from the limited social interaction.

6.1.1. Reconceptualizing learning approaches and opportunities

For the participants, the switch to a remote work setting led to a drastic change in work and learning practices. The change made some employees feel overwhelmed by the many new topics and need to reorganize the activities (for example, how to communicate with team members, how to set up online workshops, or how to document work processes). “We had to deal not only with a worldwide pandemic but also with an almost 100 percent change of our daily work practices”, Christoph stated. Another demanding problem was dealing with the uncertainty of the pandemic situation and being nervous about not being able to keep up with the fast change. Some employees stated they were confronted with topics they usually do not have to take care of. For example, they had to figure out a lot of technological challenges. On the other hand, there were also positive notions about how smooth the change to the remote work setting was managed by such a traditional company and excitement about new tools and working practices.

Concerning learning, Regina, a process management expert who works in the Innovation department, stated: “Every day I am learning something new because new skills are required”. The adaption to the ongoing change of work practices made the employees feel more confident with the remote work setting over time. Moreover, they shared a feeling of pride or mastery in handling the change with its new tools, methods, and forms of collaboration. Also, the unlearning of former work processes and habits (for instance, printing some things out on paper) was considered an achievement with the freedom to rethink processes.

Previously, many employees only regarded formal training or seminars as valuable learning opportunities. These were stopped in the beginning of the pandemic, promoting a re-evaluation of what is considered learning. This void in learning opportunities was often filled by everyday on-the-job

learning about urgent topics deriving from the transformed work setting. Employees reported that they felt more freedom to explore learning topics that were not directly linked to their original job because there was a need to fill in a knowledge gap. At the same time, this more informal and ad-hoc approach was often only in hindsight, considered learning, and the participants felt insecure about what should be claimed 'learning'.

When asked for their learning strategies in the remote work setting, the participants named mainly three approaches: tutorials, networks, and blocked learning time. Tutorials and How-to-videos, for example, on YouTube, were used as a starting point to explore a topic and perceived as helpful for technical problems. Some employees thought about tutorials as the best way to start the learning process, while others preferred using their network. For example, insider networks in the company combined the possibility to ask about information with social interaction. Moreover, discussions in team chats were also considered a form of informal networking. One participant, Caro, who works as an Online Marketing Manager, explicitly signed up for networking events about specific topics outside the company to learn from experts within a field. Another common learning strategy was to have a weekly time block for learning. During this time block, the employees could focus without interruption and enjoy the flexibility to spend the learning time purposefully. Some stated they used the former commuting time or their daily walk for learning now, for example, by listening to podcasts.

6.1.2. Need to self-manage the work and learning

Another employee experience during the remote work setting was the increased need to self-manage their learning and everyday work. New structures and routines had to be established, for example, for collaboration in teams, without previous experience or guidance. Because a remote setting did not exist before in that company, employees and managers were new to the situation, and no experts existed. This situation was specific to the sudden transformation of work practices to a complete remote setting during the Covid pandemic. The participants reported feeling overwhelmed from time to time.

The opportunity to schedule their work and learning time more freely and according to their own needs was regarded as an advantage of the remote setting. The skill to handle uncertainty and fluid work contexts increased, according to some participants. "For most of my colleagues this switch to remote work was very demanding and fearsome because they never experienced it before, but now they also say that it was a good opportunity. A lot of the processes and practices that we established work better than those that have been in place before", Arne stated. Some employees stated that integrating e-learning or YouTube videos for learning into their everyday work increased their efficiency. Moreover, being able to learn undisturbed by people passing by and distractions in the office improved some employees' learning experience. Others decided to re-schedule part of their work time to learn about topics that were not strictly job-related or engage in voluntary projects within the company.

The biggest challenge related to the increased self-management was prioritising learning and setting aside specific time for it. They reported that there were competing demands between their assigned everyday tasks and their individual need for specific learning time. This was especially true for those participants that dealt with an increased workload and regarded learning as an extra accessory. Moreover, planning learning time and lacking a framework for learning posed a difficulty. Generally, the participants felt they had to be self-disciplined when drawing a line between private and work time in the remote work setting as this statement from Christoph shows: "I love the freedom that we got

through the remote work setting, but personally I see a danger of not being self-disciplined enough to draw a line between work and private life. My computer is always turned on, so I'm also checking my e-mail in the evening before going to bed".

6.1.3. Limited social interaction highlighted barriers to learning

The isolation of learning activities and the limited social interaction were mentioned as considerable barriers to a good learning experience throughout all focus groups. The participants named several specific challenges they are facing in the remote setting – in everyday work and formal learning settings.

"If I can't socialize with my colleagues, I am less motivated to engage in my work. And I felt that, too, for learning. I can't really see the point in what I am learning for? Whom am I working for?" Steven from the HR department wondered. The *lack of motivation* was one challenge that participants brought up linked to the inhibited social interaction. As stated by one of the participants, the low motivation resulted from the absence of social belonging and purposeful learning. The social isolation also presented the challenge of *less immediate feedback*. Like any interaction in the remote setting, room for feedback had to be scheduled and occurred less spontaneous.

The very structured and non-spontaneous character that employees experienced in their everyday remote work was a barrier to informal exchange and learning on the job. Scheduling a meeting to ask a co-worker for help or feedback required much effort.

"I had to prioritize my need to learn about a topic and schedule a meeting with somebody who could help me with it. But I couldn't just ask someone in-between if they could show or tell me something. That was breaking away [in remote work]. So that made learning more difficult for me because I couldn't talk to someone spontaneously."

(Regina, Department of Innovation)

The participants reported that, next to the time constraints and meeting-packed days, they felt like they did not want to bother co-workers with their learning topics, which constrained their exploration of new learning topics. Not knowing what their co-workers are currently doing, if they are stressed or if they might have time for an informal chat led to insecurity. Thus, employees said they *avoided being a burden* to their co-workers.

Specifically, *one-to-one exchange* in everyday work and formal learning settings was absent. In formal training, employees felt they were less likely to ask questions to the instructor because they had to talk to everybody in the (virtual) room. Moreover, bilateral discussions with other participants in breaks or dedicated group work did not exist. *Exhaustion from the online setting* and *less focus on the learning situation* were likewise challenges. In formal settings, the lack of visual feedback and engaging instruction led to frustration and the feeling of being depleted after online training or seminars. Thus, more breaks and more interactive methods for instruction were needed.

Further, some participants said they were less disciplined in focusing on learning when alone. Participants reported that focusing on the learning was even more problematic when trying to *multi-task learning and their everyday work*. They perceived an implicit expectation to do their everyday work

besides the learning, for example, answering e-mails and chat messages. Because when working and learning in the home office, there was no spatial separation between everyday work and specific learning time, some employees missed going to in-place seminars. Ilka, working in Traffic Planning, concluded from her experience that the pressure to multi-tasks made both experiences, the learning and the working, worse. Still, reflecting on the experiences from the last two years, she did not find a helpful practice to overcome the problem.

6.2. Findings on how digital and self-directed practices can support the workplace learning (RQ2)

After showcasing the results on the employees' experiences with learning in the remote context, the following sub-chapter will focus on the findings on how learning practices like WOL can contribute to the learning landscape. The points which have been highlighted in the focus groups were the chance for more social interaction in learning and the support of a semi-informal framework. Moreover, they stated how the learning practice encouraged their reflection on learning processes and goals and opened up a discussion about helpful learning formats.

6.2.1. Increasing social interaction

Being asked about their experiences with WOL as a learning method and how it can contribute to the learning environment in the company, the benefit of interdisciplinary and informal peer interaction was stressed by the participants. The employees who participated in WOL reported it increased their curiosity and intrinsic motivation to explore new topics and sparked their joy in learning because they had a sense of social belonging to their peer group.

Especially the weekly meetings within their peer groups (around five people) helped to fight the feeling of isolation during remote work and lockdown in Germany. Ina stated that the weekly meeting opened a room for in-depth connections with her colleagues because "each one of us had one moment in those twelve weeks where we touched upon an emotional topic that we felt we could share in the group". They got to know new colleagues and build interdisciplinary networks within the company, which they felt were also valuable for their work. The diversity of the group members regarding professional background was also deemed beneficiary when it came to sharing knowledge. The learning practice allowed for an in-depth discussion of topics and allowed for more sensitive topics like failures, struggles and personal concerns because of the safe space created in the weekly meetings. While some employees enjoyed the positive peer pressure from the group, others would have liked to work closely with a tandem partner on their learning goal. They assumed it would help them achieve their learning goal.

Using the external network helped some participants build meaningful relationships inside and outside the company. Approaching people with the purpose of learning from them was new to some. "I found the slogan 'do something good and talk about it' inspiring", Thorben stated. Even though all participants stated to have tried out the social media suggested by WOL (LinkedIn), not all participants felt comfortable with the social media focus of the learning practice. Some would have preferred to use company-internal networks or non-digital ways of building a learning network.

6.2.2. Providing a framework for learning

By providing a semi-informal opportunity for learning, the WOL method can help the employees prioritize and make time for learning, thus supporting them in their self-management. Respondents said they would wish for systematic implementation of learning practices in the company, which provides them with a guideline for approaching new topics. What WOL specifically facilitated for them, employees said, is that they had a timeframe and structure but could adapt the learning practice to their own needs. “WOL was the first chance for me to engage in learning again in the pandemic”, Karen said, and was thankful for the scaffolded learning practice.

Moreover, the low barriers to participation (online setting, short time investment) made it easy to try out WOL for themselves. For many, the stretching of the learning practice over twelve weeks had a more sustainable impact because it allowed for in-depth exploration of their learning goal. However, Arne said he felt restricted by the twelve-week time frame and would have liked to extend the WOL process until he reached his personal learning goal. “Some weeks I just didn’t have the time to do my ‘homework’, so for me it worked to use the learning guide for a longer time to work towards my goal”, he said.

6.2.3. “Learning about learning” – encouraging meta-reflection

Because there was no one to tell the employees how to deal with the new situation created by the Covid pandemic, they had to rely on their self-management skills to define learning goals and approaches. Sometimes, self-management was perceived as a burden but also as an opportunity to broaden learning goals from strictly job-related aims. The participants noted that at the beginning of the pandemic and the sudden switch to remote work, they wanted to learn about topics that would be helpful for their team and the company.

Participation in WOL helped them enhance their self-management abilities – because it is based on a self-managed peer group while still providing guidelines for following actions. Moreover, they reported having become more self-determined in setting their learning goals and adapting them along the way, where necessary. This self-directed approach to learning was different from the company's common learning practices. “It encourages meta-reflection on what one is really interested in and why”, Caro concluded. When asked about their learning goals, most participants shared that they pursued job-related learning goals instead of private ones because of the workplace setting.

Additionally, the participants learned about new learning methods and techniques in the WOL process. The input from the circle guides by John Stepper was often considered valuable and inspirational. Sara summarizes her thoughts on the circle guide: “I didn’t like all of the methods but especially those that helped me to reach my learning goal I have now integrated into my everyday life.” Some especially liked methods were ‘50 facts about me’, ‘university at the dinner table’, and ‘letter to future me’. Moreover, the discussion about which methods worked for whom and which did not was enriching. On a more critical note, some participants felt that the methods suggested in the circle guide did not fit their learning goals. It was hard to define a reasonable goal initially because the WOL concept was somehow fuzzy before they experienced it.

6.2.4. Making the learning culture tangible

Finally, what WOL can contribute to the learning at the company, according to some employees, is to show the current value and appreciation of learning and manifest learning as part of the company's culture. The participants discussed how many aspects of the WOL practice collided with what they formerly perceived as 'default learning', such as no formal evaluation or the self-determined learning goal. They thought of WOL as an initial starting point for further learning experiments within the company based on the employee's needs and can be flexibly adapted.

On the other hand, the participants also felt that the WOL practice showed the currently lacking acknowledgement of learning in the workplace. Most importantly, they wished for learning time to be recognized as work time. An optimal solution for them would be a fixed learning time each week. What made them feel uneasy was that it was easy for them as office workers to set aside time for learning because they could schedule their work tasks freely, but it might be harder for other professions. "I think it's not okay that we call ourselves a 'learning organization' but have to do a lot of learning in our free time", Ilka argued.

Moreover, they noticed that role models were lacking since only a few manager-level colleagues participated in the WOL process. The employees felt uncertain about how far managers approved of these learning practices and how much they were 'allowed' to engage in them. Mo stated: "I feel like a lot of employees like to try out these learning opportunities but are always unsure if their managers approve of it. Can I tell them that I am doing WOL next to my daily work?". At the same time, most of the participants stated that managers should function as role models for learning.

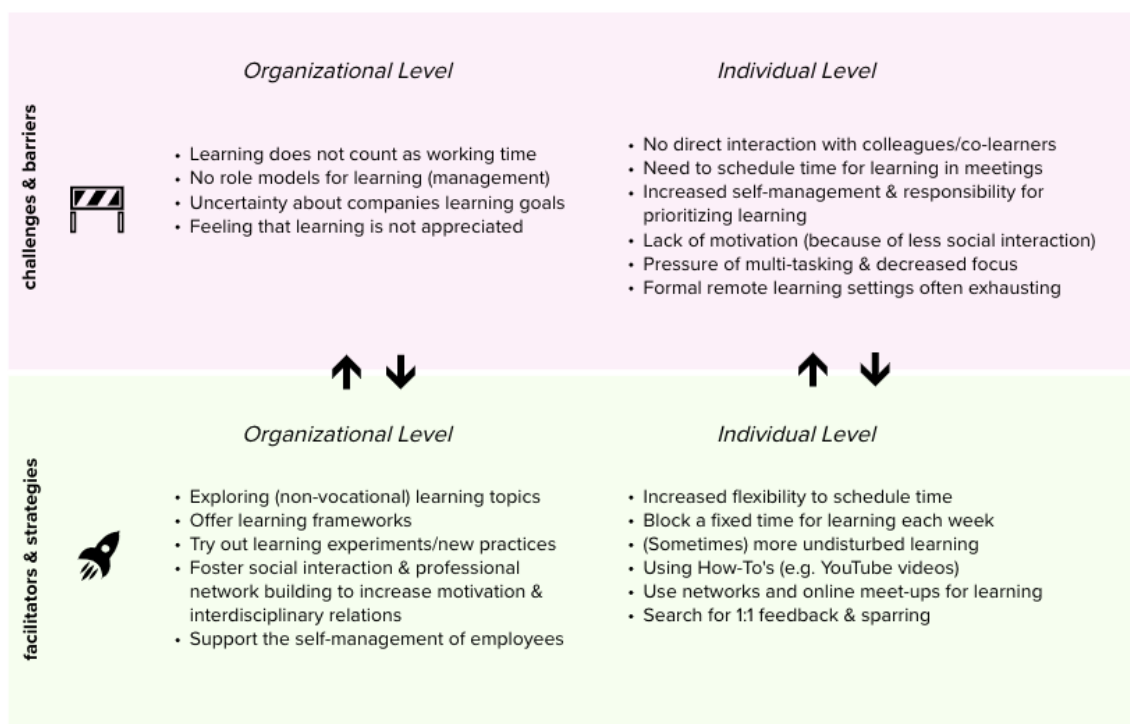


Figure 8: Challenges & facilitators for workplace learning

7. Discussion

In this chapter, I will interpret the findings and explain how they can speak to the theoretical concepts and existing academic literature which has been presented in previous parts of the thesis. After this, the strengths and limitations of the study and suggestions for further research will be set forth.

The results from the analysis of the focus groups make clear that employees who switched to a remote work setting at the beginning of the pandemic experienced a transformation in their work and learning practices, with the lack of direct and spontaneous social interaction being the biggest challenge. The need to self-manage their work and learning increased while they struggled with the lack of feedback, work intensification and handling new tools. Moreover, the perception of what is considered 'learning' was revised, too. When reflecting on how they managed their new work setting, employees stated that informal learning increased because formal learning opportunities were missing. The key insights about the challenges for learning in the Covid-context of that specific company might provide insight into understanding WPL in remote and hybrid work contexts since the social interaction will continually be mediated by technological tools.

Thus, semi-informal, digital, and self-directed learning practices like WOL, which invite more social interaction among employees, were welcomed. These practices provide a semi-structured guideline for the learning process, enabling the learner to build skills for self-directed learning and meta-reflection on learning goals and processes. Furthermore, it makes the existing learning culture tangible by showing the workplace's affordances and constraints for learning.

Unhindered social interaction is important for (virtual) Communities of Practice

The findings show that the biggest challenge for WPL in the remote work setting was the constrained social interaction between the employees. The prioritization of this topic by the participants reflects the need for (informal) discussion and peer reflection on learning topics, which the existing formal formats could not provide. Especially the lack of spontaneous and one-to-one interaction was perceived as the biggest challenge. The technological tools that were used (MS Teams) could not mediate interaction in the same way as a physical presence would. One of the resulting challenges, was the lack of feedback on the learning process (Vähäsantanen & Eteläpelto, 2018). It can be suggested that recurrent and formalized feedback on the learning process from peers or managers will help the employees to build confidence (Vähäsantanen & Eteläpelto, 2018).

On a conceptual level, the relevance of CoPs for learning, also in remote contexts, has been shown by this study. Peer and social interaction to learn from each other is an important part of learning. It has also been shown that employees regard themselves as part of several CoPs, transitioning between novice and expert roles. The employees' need for interpersonal relations aligns with the concept of one organization (the company) being an overarching CoP, where employees share a common goal and intrinsic motivation to become full members. In the specific situation of the case study, the roles of experts and novices changed because remote work practices did not exist in the company under study before. But employees with experiences from other work contexts might have taken on the role of experts, even if they might be newcomers to this specific company. Thus, mutual learning and a more

trial-and-error driven approach took place – with employees taking the role of learning facilitators and structuring seemingly unstructured learning environments (Billett, 2004).

New insights could be provided on the still constrained social interaction in remote communities. The struggle to learn from other community members in the remote work setting highlights the need for unhindered and spontaneous social interaction. Interestingly, there were calls for tandem partners instead of larger CoPs, which may emphasize the employees' wish for direct interaction and someone to discuss their learning goal and process with (Vähäsantanen & Eteläpelto, 2018).

The workplace needs to afford room for learning & role models

Another key finding was that employees wish to have a fixed time for learning, which should be afforded by the workplace instead of constraining learning by valuing only work-related time investment. Furthermore, the answers show that employees who are motivated to learn will make room for their learning anyway – exerting their learner agency. Thus, the case study is a good example of the organizational constraints on learning (for example, the focus on formal training, the non-existing learning culture, and no defined time for learning) and the challenges that derive from this.

This interpretation speaks to the bounded learner agency model by Billett and Choy (2013), which states that the individual learner is often limited by organizational boundaries, such as the implicit learning culture and the goodwill of the management. Suppose workplaces want to afford more learning and become a 'learning organization'. In that case, they need to reflect on existing implicit barriers to learning and push the managers' role to become facilitators for learning (just as Campbell and Evans (2016) found in their study of line managers' role identity).

Overall, the workplace constraints seem to have a huge impact on the existing learning practices, and often the diverse needs of the employees for their individual learning are disregarded (Billett & Choy, 2013). A contribution that this case study can make to the understanding of workplace affordances is the impact of crisis (such as the Covid-pandemic) on them. The change and insecurity of work practices was an additional constraint that, to some extent, stopped or inhibited (formal) learning. At the same time, the exceptional context of the pandemic and its impact on the workplace allowed to reconsider and push existing workplace boundaries and create new understandings of learning.

The learner agency can be increased with clear learning directives

The literature review has shown that a considerable challenge for the individual learner is the feeling of isolation in the transformed work practices and the responsibility to prioritize learning (Rigolizzo, 2018). Similarly, the findings from the case study show that the learner agency was reduced because of the demands to handle the transformed work practices and self-manage their work and learning. Not only to prioritize learning oneself but also to be a burden to co-workers was identified as a challenge for learning that was not mentioned in existing literature (to the best of my knowledge). The employees had a high intrinsic motivation to engage in learning practices or even create new ones despite the

constraints. Consequently, it can be suggested that employees have high motivation for learning and are able to define their learning goals but lack validation of their investment in learning and a framework for how to get there.

This interpretation aligns with the findings in previous literature that the learner can exert her agency more easily in an organizational setting with clear directives and a shared vision for learning and learning-promoting work structures (Vähäsantanen & Eteläpelto, 2018; Vallo Hult & Byström, 2021). If learning practices are regarded as a tool for empowering the employees and not only for professional development, a clear learning directive can be a useful tool to provide a guideline on the company's goals. With a clear learning directive, employees can adjust their self-directed learning and may be more confident to handle uncertain work and learning (Ellinger, 2004; Littlejohn et al., 2012). Moreover, reflection should be an integral part of the learning process. Otherwise, the findings show that employees have no feeling of achievement and do not consider their practices as purposeful learning.

Furthermore, the findings suggest that learning directives should apply to all employees of an organization. First, to provide psychological safety for the employees to increase their learner agency (Can I take time for learning? Will I have any disadvantage if I learn instead of working?) (Rashman et al., 2009). But second, the employees seemed to feel guilty because they were privileged to learn while co-workers did not enjoy the same degree of freedom in their self-management. Unlike the findings of Tikkanen and Nissinen (2018), the factors influencing the learner agency were apparently not gender or social status at work but the profession (office vs. non-office) and the goodwill of the respective management.

Guided participatory practices can legitimate learning

The main challenges named by the participants were the limited social interaction and the need for self-management. The results show that semi-informal, digital, and self-directed practices, such as WOL, can provide the framework for learning and social interaction. They create a room where the employees can pursue their own learning goals and fill their need for peer feedback. Thus, they limit the responsibility that is put on the individual. Moreover, despite the digital setting, the learning practices provide space for social interaction outside of the work context.

In line with findings from Littlejohn et al. (2012) and Margaryan et al. (2015) the study of WOL in the public transport company shows that natural and multimodal learning settings are perceived as helpful and relevant (Billett & Choy, 2013). Moreover, the knowledge sharing in the peer group setting helped build trust-based relations between co-workers and increased the feeling of connectedness, just as found by Margaryan et al. (2015). In contrast to their findings, employees in this study also enjoyed sharing non-vocational topics in their communities.

Furthermore, the guided participatory practices can reflect how much learning opportunities the organization can afford. By creating room for new learning practices that might deviate from what was considered 'default' learning before the pandemic, the new practices allow a discourse on which learning format are perceived as most helpful for the employees. This shows the conceptual role of participatory

practices in WPL as a mediator between the learners' needs and the organizational boundaries (Billett, 2001). The guided practices allow employees to push the boundaries and fulfil their own learning needs.

Strengths & Limitations

The case study provided in-depth insights into a specific learning environment and contributed to understanding the needs of the employees. Consequently, the findings of this study will hopefully serve as a basis for further activities to enhance the workplace learning in this company. For example, the feedback of the participants on WOL will help to validate the value of the practice when implementing it into the existing learning landscape of the company. Moreover, the needs that the employees articulated concerning having managers as role models and a specific time they can spend on learning are specific recommendations that can be put into practice.

At the same time, the findings of this research are limited in applicability for other work contexts because of the specific workplaces affordances and barriers. Even though often used in the learning sciences, the case study design limits the generalizability of the findings (Fischer et al., 2018). This implicates, that the findings of this study might be a good initial point for exploring WPL in other contexts – be it a remote or hybrid setting – but they cannot be transferred in detail.

Concerning methodology, for this study, focus groups were an appropriate choice to answer the research questions because they allowed getting insights from a diverse group of employees while still providing a common ground of discussion (for instance, as opposed to individual interviews). Still, group dynamics such as trying to impress the group, stating 'correct' answers, or dominating other opinions are some of the behaviours that might have occurred.

While there was good reason to focus on office workers, who have been most affected by the switch to remote work, another limitation of this study is the exclusion of non-office workers as part of the sample. That is also due to the limited access that non-office employees have had so far to the LMS and to the digital tools (such as MS Teams) necessary to conduct the virtual focus groups. Additionally, a possible bias might have derived from the participants huge intrinsic motivation to engage in the new learning practice and their interest in WPL, generally.

The inside perspective that I took as researcher and employee and the specific research setting during the restrictions of the Covid-pandemic will hopefully provide an interesting addition to the body of research that has been done on WPL in remote work settings. It can contribute by shedding a light on the impact that the pandemic had on work and learning practices and the challenges that employees might be facing in such contexts.

Future research

Deriving from the limitations, a reasonable extension of this study would be to focus on other target groups. For instance, to investigate the experience of non-office workers and their needs and challenges

for WPL. This might contribute to a more comprehensive understanding of the learning situation at hand. Further, it would be interesting to apply a similar research design and aim to other contexts, such as similar companies or different sectors or international cases. Doing so would help cross-validate some of the findings and determine company-specific challenges and general factors that impact the WPL (for example, the different learning cultures).

Ideas for future research resulting from the findings would be to explore more in-depth the relationship between the organizational barriers and the individual challenges for learning to explore causality or interdependencies. Also, it would be interesting to explore how other learning practices than WOL can support the WPL and address some of the named challenges. Going into detail, exploring some of the underlying assumptions and their implications (for example, the feeling of burdening co-workers with one's learning) might prove insightful.

8. Conclusion

This study aimed to describe how the switch to a remote work setting affected the employees' learning experiences and investigate how digital and self-directed learning practices might support workplace learning. The problem that drove the inquiry was the effect of the suddenly transformed work practices, due to the Covid-pandemic on learning and the need to address existing challenges on an organizational and individual level that might inhibit learning. To answer this problem, a case study in a public transport company in Germany was done, and three focus groups were conducted with employees that participated in the WOL learning practice. The results of the focus group suggest that challenges occurred on two levels: the individual level, in how employees were affected by the remote setting; and the organizational level, where implicit barriers inhibit learning.

The most highlighted challenge was the lack of social interaction during remote work, which resulted in fewer opportunities for feedback, increased self-management and less purposeful learning activities. Digital, self-directed, and semi-informal learning practices like WOL, if embedded in a learning-supportive culture, can provide a framework for learning, and increase social interaction by giving room for learning and pushing existing boundaries.

The implications for research are twofold. First, the research design of a case study and an insider perspective of the researcher seems to be a promising approach to understanding the organizational setting for learning at hand in-depth. Thus, similar approaches might be useful for the study of WPL. For the field of IT and Learning, the understanding of workplaces as CoPs might be an interesting framework because it suggests looking at the way that employees sustain the workplace by participating in the offered practices. Moreover, in remote work settings the technological infrastructure mediates the social interaction between employees and thus, has a highlighted role for the community.

For professional practice, the findings emphasize the need to understand the diverse challenges of employees before designing learning practices and how they derive from the organizational barriers. This means the attention may be drawn on formal and informal learning opportunities in the organization instead of focussing on the skill set of employees exclusively. Moreover, those learning practices should be revised and adapted constantly.

Finally, the findings show the huge impact that the Covid-pandemic had on the employees and how demanding they experienced at the beginning of the pandemic and their surprisingly high intrinsic motivation to engage in learning activities. Thus, the Covid-pandemic can be seen as an opportunity for new practices because it allowed to reconsider former learning processes. In this new room of opportunities, practitioners and academics concerned with WPL should focus on the needs and experiences of the employees, for example, by integrating them into the design process.

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Appendix 1 – Interview guide focus groups

Topic 1: Experiences with learning during remote work

1. What were your experiences with learning during the work-from-home times so far?
(Goal: broad & open introduction; initialize reflection)
2. Did you encounter any challenges when you wanted to engage in learning?
If yes, which? If no, what were factors that facilitated the learning and your learning strategies?
(Goal: find out challenges and learning strategies)
3. Imagine you wake up tomorrow as CEO: What would you do to enhance the workplace learning?
(Goal: transition to topic 2; open up creative thinking and add organizational perspective)

Topic 2: Contribution of digital, informal, and self-directed learning practices

4. What were your experiences with WOL or similar learning practices?
(Goal: reflection & feedback on learning practice)
 - What were the aspects you liked most about WOL/ similar learning practices? Why?
 - What were aspects that you didn't find not useful? Why?
5. What can learning practices like WOL add to the learning environment? How?
(Goal: Contribution of learning practice to face the challenges for learning identified before)
6. Outro: Is there any other topic that you want to raise?