

*A case study of exploring informal learning and its
perceived impact on professional development at
an Irish software company*

Ingrid Valko-Juhasz

x20100736

Centre for Education and Lifelong Learning

Master of Arts in Educational Practice

2022

National College of Ireland

Submission of Thesis and Dissertation

National College of Ireland
Research Students Declaration Form
(Thesis/Author Declaration Form)

Name: Ingrid Valko-Juhasz

Student Number: x20100736

Degree for which thesis is submitted: Master of Arts in Educational Practice

Title of Thesis: A case study of exploring informal learning and its perceived impact on professional development at an Irish software company

Date: 2nd August, 2022

Material submitted for award

- A. I declare that this work submitted has been composed by myself. ✓
- B. I declare that all verbatim extracts contained in the thesis have been distinguished by quotation marks and the sources of information specifically acknowledged. ✓
- C. I agree to my thesis being deposited in the NCI Library online open access repository NORMA. ✓
- D. *Either* *I declare that no material contained in the thesis has been used in any other submission for an academic award. ✓

Or *I declare that the following material contained in the thesis formed part of a submission for the award of

(State the award and the awarding body and list the material below)

Acknowledgements

I would like to take this opportunity to express my sincere thanks to my supervisor, Dr. Yvonne Emmett for her insight and guidance.

I would also like to thank my managers and colleagues who supported me during this process and gave of their time to participate in this research.

Finally, I would like to thank my husband, who encouraged and supported me in many ways.

Table of Contents

Abstract	8
Chapter 1: Introduction	9
1.1. Introduction	9
1.2. Background	9
1.3. Rationale for the study	11
1.4. Purpose of the study.....	13
1.5. Overview of Methodology	14
1.6. Outline of the dissertation.....	15
1.7. Conclusion.....	15
Chapter 2: Literature Review	16
2.1. Introduction.....	16
2.2. Adult learning theory	16
2.3. Workplace learning	18
2.4. Informal learning	20
2.4.1. Defining informal learning.....	21
2.4.2. Workplace as a learning context	25
2.4.3. Self-directed learning in the workplace	27
2.4.4. Observational learning and learning from others	29
2.4.5. Knowledge sharing and digital tools in workplace learning.....	30
2.5. Conclusion	32
Chapter 3: Methodology	33
3.1. Introduction.....	33
3.2. Philosophical underpinnings	33
3.3. Methodology	36

3.4. Organisational context	39
3.5. Participant selection.....	40
3.6. Data collection methods	41
3.7. Data analysis.....	42
3.8. Positionality	44
3.9. Ensuring quality	45
3.10. Ethical considerations	46
4. Conclusion	46
Chapter 4: Findings and Discussion	47
4.1. Introduction.....	47
4.2. Overview of key themes.....	47
4.3. The meaning of informal learning	48
4.3.1. Defining informal learning.....	48
4.3.2. Informal learning in practice	50
4.3.3. Knowledge sharing online	51
4.4. Professional learning in a remote environment.....	53
4.4.1. Effects of remote working on learning.....	53
4.4.2. Importance of online structured learning events	54
4.5. Impact of informal learning on professional development.....	57
4.6. Perceptions about promoting informal learning in the organisation	60
4.6.1. Supporting informal learning	60
4.6.2. Recognising informal learning	61
4.7. Conclusion	62
Chapter 5: Conclusion.....	63
5.1. Introduction.....	63
5.2. Overall Conclusion and Contribution	63

5.3. Limitations	65
5.4. Recommendations for further research.....	66
5.5. Implications and recommendations for practice	66
5.6. Conclusion	68
References	70

List of Appendices

Appendix 1: Plain language statement.....	74
Appendix 2: Informed consent form	76
Appendix 3: Question guide	78

Abstract

This research examined informal learning online and its perceived impact on employees' professional development at an Irish software company. With the COVID-19 pandemic, a new era of remote working has started which has overridden common working and learning practices at the workplace. This has resulted in changing formal and also informal learning practices, which change has its significance since most learning at workplace occurs informally, on-the-job (Dale & Bell, 1999). This study explores how informal learning is carried out in a remote world, what employees understand by informal learning and how it affects their professional development, and what is their perception about supporting informal learning at the company. The study is framed by adult learning theory (Merriam, 2008), as well as the concept of workplace learning and self-directed learning. This is an interpretivist, multi-method case study, and used semi-structured interviews and company documents, policies and other artefacts to gain insight about informal learning at the workplace. Data was collected through six semi-structured interviews, followed by thematic analysis. Interview transcripts and company documents were analysed by using Braun and Clarke's thematic analysis. Four themes have been identified altogether, that are understanding informal learning, professional learning in a remote environment, impact of informal learning on professional development, and perceptions about promoting informal learning in the organisation. This study confirms that employees see informal learning as a concept for unstructured learning events that occur on-the-job and is often facilitated by peers or initiated by the learners themselves in the form of self-directed learning. Research shows that informal learning activities at the company usually occur in the forms of job shadowing or learning from more experienced peers and self-directed learning, which was fostered by this significant shift of working remotely. Findings showed that informal learning is critical in a business setting, that leads to better performance and career development. Interview participants also agreed that while informal learning is expected in some cases, the effort that is put into informal learning is not recognised by management.

Chapter 1: Introduction

1.1. Introduction

This chapter provides an overview about the research topic and background, describes why the topic was chosen and what the research study seeks to achieve. This study is situated within adult learning at the workplace and is focusing on the topic of informal learning in the online space but explores other closely related topics in this area, such as self-directed learning, knowledge sharing or learning from peers. This study also seeks to explore employees' understanding and practices about informal learning at the workplace, and its impact on their professional development.

Choosing the research topic was strongly affected by my background as a learning professional, because based on my experience, informal learning has particular importance in workplace learning. This study is hoped to draw attention to the importance of informal learning and inspire learning professionals to include informal learning practices in the learning and development strategy in the future.

1.2. Background

The idea for the topic of this research has come from early 2020, when the pandemic has started. COVID-19 has changed the way of working in the corporate setting and most companies have started to introduce a hybrid or a full remote model of working. This has changed workplace learning as well, companies switched to online learning solutions and completely online training delivery. As a learning professional at an Irish software company, I have experienced the urge to move all corporate trainings, learning events and learning materials to the online space since 2020. When the pandemic has started, the Knowledge Management and Training Department of the company in this study has commenced to move all training courses and other learning events online. A core training course that is mandatory for all new hires, the Product Training was the first course that has been redesigned and moved online entirely. Before the pandemic, that was a four-day face-

to-face training course, but in the beginning of 2020, they have recognized that creating its online version was crucial. I was heavily involved in this process and had been working on designing and creating the online version of the Product Training that since then contains a 4-hour long e-learning course and a following virtual practice session with one of the trainers. Other learning events have been also organised, such as more Powerhour sessions. Powerhours are virtual presentations through MS Teams with a wide range of audience at the company, providing high level overview about a certain topic. The recognition that all courses needed to be moved online, has fostered the process of cleansing and restructuring the company's Learning Management System (LMS) because learning needed to be tracked and followed online. The company in question had an LMS that was not in use regularly, but the changed circumstances basically forced the Training department to create an LMS strategy that could be followed in the future by the whole organisation.

As structured forms of learning moved online, consequently, unstructured, informal learning (Marsick & Watkins, 2001) and interactions between employees also moved to the online space and now are facilitated by online tools and technology. While as a trainer I had the opportunity to experience the challenges that online learning and training delivery have, informal learning occurring online is not less challenging. In a hybrid or remote working model social interactions are not as strong between employees as they were before, meaningful conversations, interactions and opportunities for informal learning become even harder to occur. Employees have less opportunity to learn from peers, as they do not have the chance to learn through observation. Informal learning activities, such as on-the-job learning or mentoring sessions are very limited in an online setting.

Recognising the importance of informal learning at the workplace and interest in this topic started in my previous role, when I was a team coach at a social media company. While I was responsible for employees' performance improvement and train them on actual operational guidelines, I had also the possibility to observe how they learn while working and to design strategies that facilitates formal and informal learning as well. I recognised that job shadowing, learning on-the-job and knowledge sharing was crucial for employees to master their role in an environment where

continuous learning was expected, and I have organised formal and informal learning events to foster this process.

In my current workplace, however, I have not experienced that learning professionals would have been involved in facilitating informal learning opportunities. Because most learning in the workplace occurs informally (Dale & Bell, 1999), I find it interesting to explore how employees find opportunities to learn informally in a digital world, especially that there is not any strategy about informal learning at the company. Considering the fact that employees would learn much more through informal learning activities than at resource-heavy, organised trainings, it is worth to research how employees find ways to learn informally in an online setting. This research aims to explore the informal learning practices that employees are engaged with in an online work environment and how they perceive its impact on their professional development.

1.3. Rationale for the study

While it is known from Dale and Bell's (1999) research that most learning occurs in the workplace informally, on the job, rather than through formal training (Eraut, 2004), it is not clear what is meant exactly by informal learning. Informal learning has many, mostly broad definitions, and there is disagreement among researchers over some of its characteristics, such as intentionality and consciousness. Some argue that informal learning is intentional and make a distinction from incidental learning (Marsick & Watkins, 2001), while others say informal learning is "unintentional and results from interaction with other co-workers" (Le Clus, 2011, p. 359). Based on my experience as a learning professional, informal learning at the workplace either occurs through interactions with peers, unstructured learning events or is initiated by the learner in the form of self-directed learning and it is triggered by different motivations, such as lack of knowledge about something, interest in the topic, etc. This definition is based on my experience only and excludes other areas of informal learning, such as incidental learning. In the next chapter, the literature review, more approaches to definitions will be discussed and a scholarly definition will be formed based on scholars' view in this field.

This research also aims to gain insight about employees' understanding about informal learning and identify informal learning activities that they carry out while working. The aim of this study is also to investigate the online aspect of informal learning and gain insight on how it occurs at the company because ultimately, the majority of work – and workplace learning – is carried out online. There are not explicit informal learning policies in place at the company yet, however, there are some forms of informal learning that are highly supported by management. For example, taking additional online courses on LinkedIn Learning or participating in the company's mentoring programme. Mentoring is also considered as a form of informal learning (Marsick & Watkins, 2001), which – along with structured learning activities – moved online in the last years.

Informal learning, this complex knowledge acquisition contributes to professional development that would add to organisational growth. Consequently, if a company aims to keep its competitive advantage, informal learning is critical to occur. Informal learning increases employee performance, productivity and employability (Dale & Bell, 1999). These are however strongly embedded in the organisational structure, the company culture, the workplace climate, management style and professional relationships. The social aspect also has to be taken into consideration when examining informal learning at the workplace. This involves relationships that are crucial in workplace learning, social knowledge construction, cultural practices and products of knowledge resources (Eraut, 2004).

Workplace learning often refers to competence building, as employees are expected to improve their skills and competence on fields related to their job. This would lead to organisational change, but it would only happen when learning is applied to everyday practices at work and shared between the employees (De Moraes & Borges-Andrade, 2014). However, knowledge and expertise sharing with their peers does not happen by default, it is also strongly embedded in company culture (Caruso, 2016). Informal learning activities, knowledge sharing and self-direction are strongly tied together, because the majority of informal learning at the workplace occurs through self-directed learning projects (Caruso, 2016). This suggests that organisations should encourage knowledge

sharing, self-direction and learner-initiated learning at the workplace in order to facilitate informal learning.

While I believe that the organisation in question emphasises the importance of informal learning, it is still not stressed enough. The other challenging factor for informal learning to occur is time constraints. Software production is part of the highly competitive technology industry with strict deadlines, and employees barely have enough time to prepare for and participate in meetings or attend even formal learning activities such as mandatory training. Recognising the importance of informal learning and investing in facilitating informal learning practices means investing in employees and talent development which is the interest of an organisation that want to keep its competitive advantage. A long-term aspiration of this study is to draw attention to the importance of informal learning at the workplace that both employees and organisations could benefit from.

1.4. Purpose of the study

The purpose of this study is to gain insight about employees' perception on informal learning at the workplace and use the findings of the research as a basis for developing the learning strategy at the company in the future. I believe that the findings of the study would be useful for varied stakeholders, such as senior management, learning and training professionals, or human resources representatives. I also expect that the insights developed in this research study would be of benefit for these stakeholders during the process of talent development strategy design.

The aim of the research is to explore informal learning and its perceived impact on employees' professional development and to explore the possible facilitating factors in informal learning to use the findings of the research as a basis for a future learning strategy at the company. The research will be guided by the four objectives of the study:

- To explore the meaning of informal learning for employees.
- To identify informal learning practices employees are engaged with in the workplace, including informal learning practices in an online setting.

- To reveal their perception about the impact of informal learning on their professional development.
- To identify the organizational factors that support and recognise informal learning.

Regarding the issues addressed above, the following research questions will be addressed:

How do employees in a financial software company perceive informal learning and its impact on their professional practice?

Sub questions that emerged through having investigated the research topic:

- What does informal learning mean to employees?
- What informal learning practices are they engaged with online and offline?
- What is the perceived impact on their professional development?
- How are they supported in their engagement in informal learning?

The main research question and sub-questions are investigating the phenomenon of informal learning at the company in general, including the exploration of informal learning activities in the online working environment.

1.5. Overview of Methodology

The methodological framework for this project is multi-method case study, as it allows for a detailed and in-depth analysis of a case (Farrow et al., 2020). The multi-method case study will be underpinned by an interpretivist philosophy. This paradigm would apply a qualitative approach, with the aim to gain insight about the research problem comprehending the context (Farrow et al., 2020). Interpretivism would advocate a subjectivist ontology and a relativist epistemology in order to explore different realities and interpretations of the participants.

As this will be a multi-method qualitative case study, research is carried out by qualitative data collection, i.e. semi-structured interviews and document analysis. Using multiple methods to collect data offers a broader scope of data that will be available to find answers to specific questions and would provide a comprehensive understanding of the case. Six interviews will be conducted online (through MS Teams) on different levels of the organizational hierarchy (i.e. team members of

different functional teams and managers of those teams) to get a more detailed picture about the learning practices and perceptions on a deeper level. Document analysis is carried out in order to facilitate a better understanding of the organisational environment, to get a richer description about the topic and also to add to the trustworthiness of the study by using triangulation.

1.6. Outline of the dissertation

This study consists of five chapters. The introductory chapter, Chapter One outlines the study, what the research is about, why the topic of informal learning at the workplace was chosen and what the research study is expected to achieve. The literature relevant to this study is reviewed in Chapter Two, which provides an overview about the topics of informal learning at the workplace, underpinned by adult learning theory. Chapter Three presents the methodology of the research that consists of the main sections of underpinning philosophy, research design or data collection methods. The findings and discussion are presented in Chapter Four, that describes the main themes emerged during thematic analysis of the interviews and documents analysis. The conclusion is discussed in Chapter Five, where the main findings are summarised, and limitations and implications of the study are also discussed.

1.7. Conclusion

This chapter provided an overview about the research study, discussing why this topic was chosen, describing the background for the research, also indicating why it is important to investigate the topic of informal learning at the workplace in the online environment. This chapter has outlined the purpose of the study along with an overview of the methodology of the research.

Chapter 2: Literature Review

2.1. Introduction

This chapter describes the theoretical framework for this study and the most significant themes that emerge in relation to the research question *how do employees in a financial software company perceive informal learning and its impact on their professional practice*. These themes are workplace learning, informal learning, followed by sub-themes that are closely related to the notion of informal learning and explore the definition of informal learning, the context of workplace learning, self-directed learning at the workplace, learning from peers and knowledge sharing online. The themes that arise from the research question are comprehended by adult learning theories which provide the theoretical framework for this study.

2.2. Adult Learning Theory

Adult learning theory is explored in this section as it has implications for adult learners' motivations, self-directed learning and context-based learning that are important in order to understand the context in which informal learning takes place. Adult learning theory was focusing on the individual learner in the beginning of the twentieth century, and it took almost a century to shift the focus to the context in which learning occurs. Before, behaviourist researchers were concentrating on the learning process itself and how it leads to change in behaviour (Merriam, 2008). Andragogy, self-directed learning and transformational learning, the foundational adult learning theories represent a humanistic perspective that emphasise the personal growth and development of the individual learner, while today adult learning is more about the context that is admittedly "a key component in understanding the nature of adult learning" (Merriam, 2008, p. 94).

Andragogy based on Knowles' set of assumptions about adult learning focuses on the characteristics and motivations of adult learners. In his framework, Knowles concludes that adult learners' self-concept moves to a more self-directing personality as they mature, they are continuously expanding their experience, and the readiness to learn is embedded in the social role of

the learner. He also emphasised that adults have different motivations for learning. Adults are driven by internal motivations, they need knowledge to be applicable in the future, so they are more problem focused than subject focused, and they need to know the reason for learning (Merriam, 2017). Applicable, practical knowledge is key in the workplace, because many roles require employees to possess practical skills and knowledge. Practical knowledge, however, many times could be constructed through informal learning activities, such as job shadowing.

Knowles saw andragogy as student-directed learning, in contrast to pedagogy, which in his understanding is more teacher-directed. At the same time, he thought about this as a continuum where both approaches could be appropriate depending on the situation. Identifying adult learning with a student-centred approach and Knowles' assumption about adults become more self-directing as they mature has supported the formation of another key learning theory, self-directed learning. Self-directed learning is characterised by the fact that it occurs as part of everyday life and most adults are about the learner taking control of the learning without depending upon an instructor or a classroom. Self-directed learning is present throughout the adult life, in the workplace, professional education, higher education and in an online setting (Merriam, 2017). Self-directed learning is intentional, individuals are conscious about their learning and they are in charge of their own learning progress. These characteristics of self-directed learning relate directly to informal learning, as it is often intentional and initiated by the individual itself, as it is discussed in the later sections.

The models of self-directed learning have also gone through a transformation. First, self-directed learning was seen as a linear process where the learner was identifying their own learning needs, then resources and instructional formats, formed a plan and evaluated the outcome. Later in the 1980s, the self-directed learning model has become more interactive and has taken the context and the environment into consideration where learning occurs. A recent model however, integrates self-management, self-monitoring and motivational factors to understand the process (Merriam, 2004).

These theories put the individual learning in the focus, however, they miss to consider the social context in which learning occurs. Context-based learning suggests that learning cannot be understood as an internal cognitive process within the individual, but takes place “as a function of three factors in the context where it occurs: the people in the context, the tools at hand (tools can be objects like a whiteboard, language, or symbols), and the particular activity itself” (Merriam, 2017, p. 28). Context-based learning often occurs in the workplace where learners interact with other individuals, thus forming a learning community. These communities can be recognised as a community of practice – “groups of people who share insights and ideas, helping one another solve problems and develop a common practice” (Merriam, 2004, p. 210). As these groups are usually heterogenous, individuals have different knowledge levels and skillset, teaching newcomers what they need to know in order to perform. Communities of practice implicate a learning process, where collective meaning making is deducted by interpreting, acting, and reflecting on action (Merriam, 2004).

Internal motivations that drives adult learning discussed in relation to andragogy, self-directed learning and context-based learning, the key pillars of adult learning theory all share something in common: they could all occur in related to professional learning and could encourage informal learning at the workplace.

2.3. Workplace learning

Adult learning theories, whether they are focused on the individual or the context, are about making sense of the world – individually or together, as a group or community of practice. Learning is not a passive process where individuals receive information, instead, learning is an active process “where learners construct concepts based on their own current and past knowledge” (Payne et al., 2009, p. 133). Another characteristic of knowledge construction is that it cannot be understood without the functional and social context where learning occurs. The acquired knowledge will be meaningful and effective for the learner when it is embedded in the context where knowledge will be used, and the individuals are situated in the context where they can interact with others.

According to Billett, cited by Kerka, “situated learning results from undertaking authentic activities guided by expert practitioners situated in a culture of practice” (Kerka, 1997, p. 2).

Learning in the workplace in many cases uses constructivism, situated learning where more experienced individuals, coaches and experts facilitate learning with scaffolds (e.g. supporting learning materials), later they gradually reduce assistance in learning and promote practice for novices and less experienced employees. Thus, learners incorporate the learning process by constructing their own knowledge. Kerka (1997) also draws attention to Billett’s studies which suggest that interaction and engagement in activities with colleagues and more experienced peers result in effective learning in the informal learning setting in the workplace.

As a learning environment and the context where learning occurs, the workplace has its advantages. The workplace is an environment where goal-directed activities happen, employees have the possibility to ask for guidance, either by direct coaching, facilitation or close assistance, or by only observing more experienced peers around them. Further strengths of a workplace are that employees have the opportunity to engage with one another and solve problems together, and through constructing their knowledge base, find reinforcement for their actions. At the same time, workplace as an environment has its disadvantages as well. Through interpersonal interactions inappropriate knowledge construction could also occur, such as bad attitudes and practices. There could also be a shortage of challenging activities as they could be often repetitive or subject to management practices, and there is a possibility that experts may be reluctant about their assistance due to time or resource constraints.

Though workplace as a learning setting has its strengths and limitations, “research findings support the value of contextualized learning that provides opportunities for knowledge acquisition and construction, practice and reinforcement” (Kerka, 1997, p. 4). The aim of the constructivist approach is to support individuals to become self-directed and independent in order to “access and use a wide range of cognitive structures to transfer learning to contexts they have yet to encounter” (Kerka, 1997, p. 5).

When exploring the opportunities and limitations of workplace as a learning setting, it is also worth considering the purpose of learning in the workplace. The purpose of learning accepted and agreed by senior management may affect company policies and procedures, and also the practices and factors that support informal learning at the workplace. Boud and Garrick (2012) argue that the purpose of workplace learning is twofold: the development of the organisation and the development of individuals. The development of the organisation contributes to production, effectiveness and innovation of the business, while the development of the individuals add to knowledge, skills and capacity to support their own learning. Boud and Garrick (2012) suggest that there are many different learning purposes and it is not clearly articulated what workplace learning contains. They also conclude that “these purposes are not always immediately apparent” (Boud & Garrick, 2012, p. 6.) and summarised the purposes of learning in the workplace in three conceptions: to improve performance for the benefit of the organisation, to improve learning for the benefit of the learner and to improve learning as a social investment, with a changing emphasis across organisation, learner and society.

In this section the constructivist nature of workplace learning was highlighted, that is often manifested in informal learning activities, such as interacting with more experienced peers which results in effective learning. The advantages and drawbacks of the workplace as a learning setting relates to how employees perceive learning at the workplace, how they find it and what challenges they face with when engaging in learning activities in the workplace. Literature about the workplace as a learning setting and the purposes of workplace learning provide background for the research question about how employees are supported in their engagement in informal learning.

2.4. Informal Learning

When exploring the notion of informal learning, researchers may run into difficulties when they aim to define it. Informal learning has many, mostly broad definitions and while it may encompass various learning activities, there is disagreement among researchers over some of its

characteristics, such as intentionality, consciousness or the role of the individual and the importance of the context in informal learning.

2.4.1. *Defining informal learning*

Garrick (2012) discusses different approaches and definitions of learning and informal learning. Informal learning is shaped by teamwork, self-direction, empowered workers and non-hierarchical work arrangements. Garrick (2012) cites Marsick and Watkins, who state that informal learning is intentional, predominantly experiential, and happens "outside formally structured activities where reflection and critical reflection are used to clarify the situation" (Garrick, 2012, p. 10). They also articulate a clear distinction between informal and incidental learning, where informal learning involves self-directed learning, networking, coaching, mentoring, and performance planning, while incidental learning is unintentional containing situations such as learning from involvement, learning from trial error, but also includes assumptions, beliefs, values, or hidden agendas (Garrick, 2012, p. 11).

Besides providing a comprehensive definition for informal learning, Marsick and Watkins (2001) come to a conclusion about the characteristics of informal learning. They argue that informal learning is "integrated with daily routines, not highly conscious, internally or externally triggered, is influenced by chance, led by action and reflection and is linked to learning of others" (p. 28). While Marsick and Watkins concluded the characteristics and the most defining elements of informal learning, Garrick (2012) pointed out that trying to define informal learning inevitably restricts its meaning. This is clear when we have a look at the incomplete list of the forms of informal learning presented by Marsick and Watkins.

Other researchers say informal learning can also be "unintentional and results from interaction with other co-workers" (Le Clus, 2011, p. 359). Le Clus (2011) discovers the notion of informal learning at the workplace through a comprehensive literature review. The importance of informal learning is emphasised based on the fact that "learning occurs not only through formal

learning initiatives (i.e. training), but also through informal learning opportunities that are embedded within everyday work activities” (p. 355).

Informal learning “describes a wide range of experiences and activities that facilitate non-formal learning in the workplace” (Le Clus, 2011, p. 370), could be planned or unplanned, is often self-directed and involves a trial-error approach to learning along the way. Informal learning strategies include social interaction, teamwork, mentoring – to mention a few. While Le Clus (2011) tries to explore the various definitions around workplace learning and informal learning, these are quite broad terms and the study doesn’t engage with one definition, rather gives an overview of definitions within the literature. As it is visible from above, these definitions are not as comprehensive as those articulated by Marsick and Watkins.

Dale and Bell (1999) understood the learning process as a continuum with formal learning at one end, and informal learning at the other. They also claim that informal learning cannot be separated from or replaced by formal learning and emphasised its importance from an employability perspective. Dale and Bell (1999) define informal learning as “learning which takes place in the work context relates to an individual's performance of their job and/or their employability, and which is not formally organised into a programme or curriculum by the employer” (p. 7). This definition is improved in the sense that it articulates employability and performance is a necessary condition of informal learning in the workplace. Accordingly, activities that aid informal learning include strategies that mostly implemented in a business setting, such as instruction, demonstration, role modelling, shadowing, practice and feedback. In order to be effective, informal learning needs to be conscious and deliberate (Dale & Bell, 1999). This condition resonates with the definition above from Marsick and Watkins (2001), as informal learning is defined as always self-directed, however, there is disagreement when it comes to the extent of consciousness, since Marsick and Watkins do not characterise informal learning a highly conscious activity.

As Dale and Bell, Eraut (2004) also saw learning as a continuum, where informal learning is at one end and formal learning is at the other. Based on the findings of the researches presented in this

study, the “majority of the learning in the workplace is informal and involved a combination of learning from other people and learning from personal experience, often both together” (Eraut, 2004, p. 248). In this model, learning from others is recognised, however, the individual has a greater role in informal learning than the social aspect. Eraut (2004) describes informal learning as learning that “include implicit, unintended, opportunistic and unstructured learning and the absence of a teacher and locates activities like mentoring in the middle, while coaching at the more formal end of the learning continuum” (p. 250). From this description it could be seen that Eraut does not provide a strict and comprehensive definition for informal learning, rather tries to describe it by using examples and some characteristics.

Furthermore, Eraut (2004) distinguishes three levels of intention of informal learning that include implicit learning, reactive learning and deliberative learning. Implicit learning occurs when the learning itself is conscious, but some knowledge acquisition happens independently of the learning attempts. Although reactive learning is intentional, it usually occurs “in the middle of the action, when there is little time to think” (Eraut, 2004, p. 250). Deliberative learning is defined as both deliberate learning and “deliberative activities such as planning and problem solving” (Eraut, 2004, p. 250). The well-thought-out typology of informal learning with the three levels of intention also adds to a more precise definition of informal learning, by distinguishing opportunistic, near-spontaneous learning and deliberative, more considered learning (Eraut, 2004).

In their study, Cunningham and Hillier (2013) defined the characteristics and processes that enhance informal learning in the workplace. While working on this framework, they have identified themes describing learning activities and underlying processes, such as active learning and modelling, relationship dynamics or planning processes. Cunningham and Hillier (2013) also have emphasized the problematic nature of defining informal learning. They have identified informal learning as “any learning activity that is related to the pursuit of understanding, knowledge, or skills that is outside the curricula of educational institutions or the courses or workshops offered by educational or training agencies” (p. 38). However, this definition is too broad, because based on this, almost

everything (such as listening to the radio or reading a book) could be considered as informal learning, as they point out in the study. To address this, they have brought the term 'explicit informal learning', which "is used to distinguish it from everyday experiences, perceptions, social gathering and other tacit learning that people experience as significant" (p. 39). By explicit informal learning they mean the recognition of new significant form of knowledge, the recognition of the knowledge acquisition process, and the understanding of the acquired skills that are initiated by the learner (p. 39). They have also added that informal learning itself is usually learner initiated, involves action and doing and results from on-the-job interactions. This study provides an accurate concept about informal learning that resonates with most definitions in terms of intentionality and self-directedness. However, Cunningham and Hillier (2013) came up with gap-filling definition regarding trying to narrow the scope of informal learning by excluding those everyday activities that are not significant.

A document published by the National Forum for the Enhancement of Teaching and Learning in Higher Education in Ireland (2016) created a framework which provides guidance for planning, developing and engaging in professional development activities. The typology of professional development activities consists learning opportunities classified as informal, non-formal and formal learning. According to this definition, informal learning is non-conscious learning, collaborative in nature and includes activities such as conversations with colleagues, peer observations or online blogs and discussion forums. The other type of learning opportunity that comes up in this typology is non-formal learning, that could be structured and unstructured. Non-formal, unstructured learning refers to activities directed by the individual, where the individual's needs and interests drive learning engagement. This form of learning includes reading articles, self-study, watching video tutorials, etc. Non-formal, structured learning means organised learning activities that are facilitated and may have identified learning objectives. These activities encompass workshops, e-learning courses, conferences or structured collaborative projects. Formal learning is always organised,

structured and they mean accredited programmes under formal learning, such as professional certificates, graduate diploma, etc.

In this section, overall seven scholarly concepts about the notion of informal learning were discussed. The theoretical approaches vary in terms of the characteristics of informal learning, however, delving into these ideas and analysing the different approaches, a matrix of key features were identified. Based on this, four characteristics of informal learning emerged that include interaction or collaboration, self-directedness or intentionality, consciousness and lack of structure, and there is varied presence of these key characteristics in each concept discussed above. Scholars have differing opinion and approach when it comes to the notion of informal learning and some of them have a narrower understanding about informal learning, for example, the authors of the paper published by National Forum for the Enhancement of Teaching and Learning in Higher Education in Ireland (2016), that involves the importance of teamwork or interaction and the unstructured nature of informal learning stating that it occurs unconsciously and categorises all other types of learning as non-formal or formal learning. Most approaches however, are more inclusive when it comes to the definitions of informal learning and expands its meaning. Based on this, the notion of informal learning employed in this study follows a broader concept, meaning that informal learning is shaped by on-the-job interactions where learning from others is key, it is unstructured and usually learner initiated, thus self-directed, and needs to be conscious in order to be effective. This section of the chapter explored the definition of informal learning, which relates to the first sub question, that aims to seek understanding about what employees mean by informal learning. In the next section, workplace as a learning environment will be explored that contribute to the research questions about the impact of informal learning on professional development, and the organisational factors that support engagement in informal learning.

2.4.2. *Workplace as a learning context*

According to Garrick (2012), learning at the workplace could be understood only in a social context and the discourse should be about this matter. However, contemporary discourse about

informal learning is linked to market economics, increasing performance and productivity. The author suggests that it is worth considering how sensible is to allow market economics to determine educational goals while the goal of informal learning is about the learner and acquiring what they find significant and meaningful.

The significance of performance and productivity related to informal learning in the workplace was also articulated by Dale and Bell (1999). They emphasised that informal learning enhances employability and brings positive benefits for stakeholders at the company. They also highlight that performance review is a tool that facilitate identification of learning needs related to professional and personal development. This way, the learning environment is heavily shaped by the managers whose involvement is crucial in supporting learning and who lead informal learning needs in the workplace. This also adds to the workplace climate where learning thrives. An environment that supports learning includes honest discussion about company performance, consistent adherence to standards, listening to new ideas, appreciation of achievement and contribution, and the importance of learning (Dale & Bell, 1999).

Eraut (2004) also believes that relationships are crucial in workplace learning, and that “the emotional dimension of professional work is much more significant than normally recognized” (p. 255). He examines learning and knowledge from an individual and social perspective. By the individual perspective Eraut means the differences in the subject and the methods of learning, and the people’s unique interpretations about what have been learnt. The social perspective is about “the social construction of knowledge and of contexts for learning, and the wide range of cultural practices and products that provide knowledge resources for learning” (p. 263). Eraut also suggests that the workplace climate and management styles have an influence on learning, along with confidence. He found that the level of confidence within the work context for learning affects learning and is also linked to challenge and support. This is again embedded in the social climate of an organization and comes from a managerial level.

De Moraes and Borges-Andrade (2014) discuss different definitions and approaches to learning, ie. behaviourist, cognitive (that emphasises the role of the individual), and socio-constructivist (where the individual could be only understood as part of the context). In the workplace, however, learning has different characteristics than learning in general: it is emergent and interrelated with the context. Besides workplace learning includes both formal and informal learning, it often refers to competence building, as this is expected from employees in organisations. While learning starts at an individual level, organisational change would only happen when individual learning is applied to everyday practices at work and shared between the employees. Based on research findings, the authors bring three dimensions of workplace learning: content dimension, dynamics dimension and social dimension. In the dynamics dimension the authors reference the findings of Gijbels et al. (2014) about the importance of self-directed learning orientation in workplace learning.

While the paper emphasises the importance of informal learning, it also calls attention to its drawbacks, such as contextual focus, accreditation challenges or possible "wrong lessons". The authors also call out the difficulties when it comes to measurement of informal learning. They address two perspectives for measurement: the learning perspective and the performance perspective. Learning perspective is about facilitating and encouraging learning within the organisation, while performance perspective makes sure that employees' behaviour reflects what has been learnt (de Moraes & Borges Andrade, 2014).

2.4.3. *Self-directed learning in the workplace*

Raemdonck, Gijbels, and Groen (2014) explore the factors that have an impact on workplace learning, with a focus on job characteristics (job demands, job control, social support) and personal characteristics (self-directedness). Job demands refer to either the physical or mental efforts an employee makes while working; job control is about the ability to make decisions; and social support refers to good relations with colleagues. A self-directed learning orientation refers to take an active and self-starting approach to learning activities. A survey research across a variety of sectors was

carried out, collecting 817 responses to reveal impactful factors on workplace learning (Raemdonck et al., 2014). Findings of the research show interactions between social support, job demands, job control and self-directed learning orientation, however, when self-directedness was omitted, the interaction effects became insignificant. Results show that job demands and self-directedness have significant and positive influence on workplace learning. Thus, the findings may serve as a basis for better job structures promoting workplace learning and encouraging a self-directed learning attitude among employees (Raemdonck et al., 2014). While responses from different sectors might provide interesting findings, a survey targeting different role levels or job areas would have revealed more significant correlations. Different role levels suggest a certain level of job demands or job control, however, the findings did not reflect any information related to the respondents' job level. The other critique about this research is that the questionnaire relies only on self-reporting, containing a one-sided perception about the workplace.

Lemmetty (2021) explores self-directed learning at technology organisations because self-directed learning is recognised as an increasing factor for competitiveness and innovation, however, companies do not investigate further the situations fostering it. The research paper defines self-directed learning as autonomous, context-based informal learning process with a sociocultural nature, as learning occurs based on the interaction with the environment or other individuals. The study also examines the frames and the environment where self-directed learning occurs by using the self-directed learning projects theory and found four types of projects within the organisations: organisation-oriented, work community-oriented, work-task oriented and employee oriented. These projects provide different goals and possibilities for employees to perform self-directed learning with various levels of autonomy and support. In addition, the study identified cultural and structural frames within the organisations that affect – either increase or decrease – the opportunities for self-directed learning: level of collaboration, supervisory work, responsibilities and roles, working environment and tools. This paper is particularly useful for my research when investigating factors that facilitate self-directed learning within the organisation.

2.4.4. Observational learning and learning from others

In this paper, Billett (2014) states that human resource professionals "should reconsider the potential of workers' learning through everyday activities and interactions at work" (p. 462). He highlights that workers can learn through engagement in work activities, observing and listening and 'just being in the workplace'. In this research, he discovers that learning through everyday work activities and interactions happens while engaging with others, through mimetic processes (i.e. observation, imitation and action). Billett (2014) is using socio-cultural constructivism and findings of anthropology to support his ideas about learning through observation. Billett (2014) proposes that Human Resource Development should provide opportunities for employees to work with more experienced peers whom they can "observe and use as models to monitor their own performance" (p. 479) and have guidance from. Employees should also be provided with the opportunities to engage in different kinds of workplace settings where they can compare what they have experienced through mimesis, thus they can maximise their learning.

A typical form of learning from peers in an organisational setting is job shadowing. Job shadowing provides employees the opportunity to observe more experienced peers while working and "is designed to share best practices, new things, or observe a new way to do things" (Seeman, Stofkova & Binasova, 2019, p. 96). Another source by Yakoob et al. (2021) identifies job shadowing with work-based learning and hands-on job training that build specific skills. It provides learners with professional experience, increases professional development and is beneficial in order to develop a desired attitude, knowledge or specific skills. This paper also discusses the opportunities of virtual job shadowing, that has high relevance in a remote working environment. It concludes that effective virtual job shadowing involved input and output processes that is handled by the organiser of the shadowing program, but more importantly, learners' motivation to complete virtual job shadowing is heavily dependent on autonomy, competence and connectivity (Yakoob et al., 2021).

2.4.5. Knowledge sharing and digital tools in workplace learning

In the workplace, the setting where informal learning occurs, individuals develop professional relationships with colleagues that "provide access to the knowledge and expertise necessary to perform in their role" (Milligan, Littlejohn & Margaryan, 2014, p. 115). The widespread use of digital tools and open, informal networks strengthen the social characteristics of workplace learning. Individuals usually demonstrate four key learning behaviours influenced by digital tools when interacting and learning in their informal network. These are consuming, creating, connecting and contributing. The authors bring attention to Zimmerman's work about self-regulation and its phases (forethought, performance, self-reflection), articulating its importance in effective learning. Goals are formulated in the forethought phase of self-regulation, which is a critical step in recognising and articulating learning needs. Communicating the goals and learning plans with the network would benefit the whole organisation, because employees would have visibility over different approaches and solutions for individual development. Utilising the 4C behaviours with the phases of self-regulated learning generate a 'charting' mechanism, a process where individuals' regulation and participation in learning and development and knowledge management foster effective workplace learning (Milligan, Littlejohn & Margaryan, 2014).

In her paper, Caruso (2016) starts the discussion with stating the problem that employees do not share their knowledge and expertise with their peers by default. While human resource development is responsible for facilitating learning and performance at an organisation, a company-wide performance improvement depends on the organisational culture. In the first part of the paper the author clarifies some notions that knowledge sharing cannot be understood without: organisational culture, formal and informal learning, self-directed learning, incidental learning and tacit knowledge. When it comes to informal learning, it is noticeable that self-directed learning is mentioned automatically, also suggesting informal learning happens through self-directed learning projects as the latter "accounts for the majority of informal learning taking place in the workplace" (Caruso, 2016, p. 47). Based on the findings of Ber and Chyung, Caruso (2016) states that employee

engagement in informal learning is mainly affected by the individual's interest in the field and the access to computer technology. Internet access and technology is essential for organisations to collect information, share it across the organisation and carry out proper knowledge management. The author highlights some technologies that Human Resource Development could use to facilitate knowledge management, for example, screencasting or using multimedia content in order to encourage knowledge sharing between employees.

It is important for business actors to recognise informal learning activities in order to make appropriate decisions in the organisation (García-Peñalvo & Conde, 2014). The authors of this paper attempt to identify instances that contribute to an employee's professional development by describing a technological framework that supports knowledge sharing. Recognising informal learning has many positive outcomes for employees, and from an employer's perspective, it enables decision makers to get informed about employees' competences and identify learning activities that facilitate achieving or enhancing those competences. To address this, evidence of informal learning should be gathered, stored and classified regularly. A possible solution could be a portfolio system, or a competence-based model that classifies the learning evidence. This information would serve as an input to make practical decisions such as those related to promotions, or to create an organisational environment that supports informal learning (García-Peñalvo & Conde, 2014).

Information technology challenged Human Resource Development (HRD) professionals to examine its applications and utilisations in the learning, performance and organisational development area (Li & Herd, 2017). This fosters the development of innovative solutions in this area, as it happened to learning material production, processes or training delivery technologies. HRD professionals used digital technology to produce e-learning courses, game-based learning and so on. Digital technology has its advantages on the learners' side as well as it enables them to personalise their learning space, provides flexibility regarding the time and pace of learning progress, enhances group learning and real-time performance support. Due to the impacts of digital technology, transformative change has become a characteristic of workplace learning. The authors

designed a conceptual framework that facilitates continuous learning, having built on assumptions addressing the following issues: the different learning preferences of individuals, the relation between learning organisational performance, and the correlation between the quality of information and the quality of learning (Li & Herd, 2017).

2.5. Conclusion

While informal learning is a complex notion with vague boundaries, the literature above demonstrated the various definitions and approaches that researchers and theorists came up with. I observed there is an argument between authors about the intentionality of informal learning, however, if self-directed learning plays a major part in informal learning, it would be difficult to carry out self-directed learning without being conscious about it. The research papers about self-directed learning were particularly useful, emphasising the environment and factors facilitating it, which will be helpful for my research, as I intend to explore the factors that encourage (or discourage) employees to engage in informal learning activities. The concept of knowledge sharing, and knowledge management is almost as complex as informal learning, and authors hardly would go into much details about that without discussing informal learning beforehand. As knowledge sharing is also a related topic to informal learning in my research, I am hoping to explore the tools and instances through employees interact with one another. Ultimately, I intend to discover how employees in a financial software company perceive informal learning and understand how it affects their professional development.

Chapter 3: Methodology

3.1. Introduction

This chapter explores how the research study was conducted, discussing the process that was followed during the research design. In this chapter, research philosophy, methodology, selection criteria, data collection methods and analysis are described, along with the subsequent sections that discuss positionality, quality and ethical considerations.

The aim of the research is to explore the forms of informal learning activities and its perceived impact on employees' professional development and to explore the possible facilitating factors in informal learning to use the findings of the research as a basis for a future learning strategy at the company.

The research will be guided by the four objectives of the study:

- To explore the meaning of informal learning for employees.
- To identify informal learning practices employees are engaged with in the workplace, including informal learning practices in an online setting.
- To reveal their perception about the impact of informal learning on their professional development.
- To identify the organizational factors that support and recognise informal learning.

The research questions have guided the research design process which is qualitative in nature. This research adopted an interpretivist philosophy, with a subjectivist epistemology and relativist ontology. This study examined an Irish software company, and this research is an interpretive, multi-method case study involving six semi-structured interviews. The gathered data and documents were analysed by using thematic analysis.

3.2. Philosophical underpinnings

This research is underpinned by an interpretivist philosophy. The interpretivist paradigm was influenced by anthropology and become known in educational research in the 1970s (Taylor &

Medina, 2013). Interpretivism aims to make hidden social forces and structures conscious (Scotland, 2012), by “understanding the individual and their interpretation of the world around them” (Kivunja & Kuyini, 2017, p. 33). A key point of this paradigm is that there are “features of human experience that cannot objectively be known, and instead of finding the ultimate truth, the interpretivist researcher aims to generate understanding” (Farrow et al., 2020, p. 15), acknowledging that cultural and individual influences cannot be removed.

Lincoln and Guba have summarised the main characteristics of the interpretivist paradigm. About the researcher, they say that the interaction between the researcher and the research participants cannot be avoided (Kivunja & Kuyini, 2017). Taylor and Medina (2013) also draw attention to the role of researcher by highlighting the importance of the researcher’s own subjectivity in the process of interpretation. The other important area that Lincoln and Guba bring to discussion is the importance of the context. They claim that the researcher has to take contextual factors into consideration and that the context is vital for knowing and understanding a phenomenon. They also believe that knowledge is created by the findings, it can be value laden and the values need to be made explicit (Kivunja & Kuyini, 2017).

When it comes to epistemological commitments, the interpretivist philosophy advocates a subjectivist epistemology, a relativist ontology and a naturalist methodology (Kivunja & Kuyini, 2017). A subjectivist epistemology means that “knowledge can be created, acquired and communicated” (Scotland, 2012, p. 9) through the meaning making process of the researcher, when he or she engages in the “cognitive processing of data informed by their interactions with participants” (Kivunja & Kuyini, 2017, p. 33). This epistemology suggests that one’s own reality is constructed through the interactions with other individuals, it is developed in a social context (Scotland, 2012). A relativist ontology presumes that reality is individually constructed, and multiple realities exist in regard to the studied situation and that these realities can be explored. Also, this paradigm is supported by a naturalist methodology where the “researcher utilises data gathered through interviews, discourses, text messages and reflective sessions” (Kivunja & Kuyini, 2017, p. 33) with the

aim to understand a phenomenon from an individual's perspective (Scotland, 2012).

The main reason why interpretivism was chosen as a paradigm to underpin my research is that it puts understanding individuals' interpretations in the centre instead of finding the ultimate truth. In this study, the focus is on understanding participants' perception about informal learning at the workplace. Also, some characteristics of the interpretivist paradigm by Lincoln and Guba were demonstrated during the research design. As a researcher, I find it important to present my own subjectivity related to this study in order to reveal any bias that could arise. These are discussed in the Positionality section of this chapter, and partially in the Introduction chapter of this study. Interaction with participants was also inevitable during the research process, especially in the participant selection, because purposive sampling was selected that suppose a pre-existing communication between participants and the researcher. The fact that interpretivist paradigm highlights the importance of context when understanding the different realities also was a major factor for choosing this philosophy that underpins my research. As this is a case study, understanding the context where the particular phenomenon occurs is vital, which in this case is the 'workplace' and mainly how it manifests itself during an average workday in a hybrid working model: the online representation of the workplace where communication happens, and the workplace culture that influences, shapes, or is hoped to shape learning activities and engagement.

The epistemological and ontological commitments of the interpretivist paradigm also support this research. Epistemology, the process of meaning making and acquiring knowledge under this paradigm is subjectivist, which suggests that the researcher engages in cognitive processes by the interaction with participants and sees the world through their viewpoint. The different realities of participants and how they perceive informal learning in the workplace could be explored through the interaction between the researcher and participants, in this case, through the data that is informed by the semi-structured interviews. The relativist ontology of this paradigm suggests the existence of multiple, constructed realities of individuals. Employees' perception about informal learning, what is more, the notion of informal learning varies, different people mean different things under that based

on their experience, assumptions or knowledge about the topic.

While interpretivist researchers advocate to use qualitative methods, the most common methodologies used within this paradigm include naturalist methodology, narrative inquiry, case study, phenomenology, ethnography, action research or grounded theory (Kivunja & Kuyini, 2017, p. 37). In the next section, case study, the chosen methodology of this research study will be discussed.

3.3. Methodology

This research employed a multi-method case study as methodology. Case study is a methodology that is often used in interpretivist researches (Kivunja & Kuyini, 2017), as it allows for a flexible approach and a detailed and in-depth analysis of a case (Farrow et al., 2020). Case study as a methodology has multiple definitions, articulated by prominent researchers such as Robert Yin, Robert Stake or Sharan Merriam. These methodologists are seen as foundational researchers in case study research, whose views are widely used and respected in the field of case study design (Yazan, 2015). Yin, cited by Yazan (2015) defines case as “a contemporary phenomenon within its real life context, especially when the boundaries between a phenomenon and context are not clear and the researcher has little control over the phenomenon and context” (p. 138). Stake and Merriam on the other hand both suggest that case studies cannot be precisely defined and Stake refers to a case as a specific, complex, integrated system which “has a boundary and working parts” (Yazan, 2015, p. 139). Merriam believes that delimitation is the most defining characteristic of a case and sees it as a “thing, a single entity, a unit around which there are boundaries” (Yazan, 2015, p. 139). According to a more generic definition, case study “is a research method involving a detailed examination and in-depth description of a particular empirical case” (Farrow et al., 2020, p. 35), where a case could be many things, such as an institution, a person, a country, a phenomenon, etc. In this research, an Irish software company will give the context for the case, which is about discovering informal learning practices in the hybrid working model of the given company.

As there are differences in the approaches and definitions of the case, approaches also differ in the case study design process. Yin – cited by Yazan (2015) – gave strict guidelines creating five

components that make up the case study design process. When designing a case study, Merriam suggests five steps to complete which were also followed during this research. Conducting a literature review is the first phase that is essential to later construct a theoretical framework. These would support identifying a research problem that would ultimately contribute to creating and specifying research questions. Finally, purposive sampling is selected to collect data. (Yazan, 2015) Regarding data gathering, Yin states that both qualitative and quantitative sources should be used during the research process. Stake and Merriam, however, believe in exclusive use of qualitative data sources (Yazan, 2015), that was followed in this study as well, since findings emerged through semi-structured interviews and document analysis.

There are also differences in epistemological viewpoints of the three methodologists, as Yin demonstrates a more positivistic approach, while Stake and Merriam follow a constructivist perspective on case studies. Stake concludes that multiple perspectives of the case exist and those should be represented, however, the best view cannot be established. Merriam demonstrates the constructivist approach by telling that “reality is constructed by individuals interacting with their social worlds” and “that reality is not an objective entity; rather, there are multiple interpretations of reality” (Yazan, 2015, p. 137). Merriam’s statement resonates with the interpretivist paradigm applied in this study, which also shares the ontological stance of multiple realities, and rejecting the existence of one single truth.

From the several methodologies used within the interpretivist paradigm case study was employed because this methodology would advocate the importance of the context and would allow an in-depth and rich description, which – regarding the topic of the research – is crucial to understand informal learning at the hybrid working model. Darke et al. (1998) draw attention to the applicability of a case study research and argue that it should be used when a “contemporary phenomenon is to be studied in its natural context and the focus is on understanding the dynamics present in single settings” (p. 279). Furthermore, they articulate that understanding the context is important especially in those cases when “there is little understanding of how and why processes or

phenomena occur, or where the experiences of individuals and the contexts of actions are critical” (Darke et al., 1998, p. 279). This is exactly the case with the chosen topic of this research project, as the findings about online informal learning at the workplace will be heavily rely on and interpreted within the environment provided by the organisation. The aim will be to explain how informal learning occurs at the workplace in a digital world, by using multi-method data collection methods. Thus, a broad scope of data will be available to find answers to specific questions and would provide a comprehensive understanding of the case.

The purpose of the research is to identify current informal learning practices and gain insight about its effects on employees’ professional development. Of course, case study as an approach has its limitations. First, there is a lack of unified, agreed research design in case studies that researches are committed to, because some researchers suggest a structured design, while other committed to more flexible approaches (Yazan, 2015). Also, it is impossible to generalise the findings from only one case study and building a theory based on the findings could be quite challenging (Farrow et al., 2020). Generalisation however, is not the aim of this study, rather to find answers to how and why informal workplace learning occurs in a particular way at the given company. Overall four team members and two managers from two departments of the organisation were included in this study to share their experiences and views about informal learning at the company. Employees from the Quality Analyst and the Product Consultant practice were invited to share their experiences assuming there are differences in the perception and approach of informal learning between the two departments – as one is more operational with a technical focus, while the other is customer facing organisation requiring different skillset from the employees of the company. Besides involving employees in the research, policy documentation was used to give further data and insights on the possible forms of informal learning, and factors that might support it within the organisation. Those documents contribute to a better knowledge about the context, which eventually lead to a more thorough understanding and description of the case.

3.4. Organisational context

The study took place at an Irish-owned financial software company. The company is producing software for financial institutions in the domain of financial regulation and regulation technology. This is a global company with more than eight hundred employees and various business functions, such as Sales, Engineering, Professional Services – just to mention the largest departments. While it is a global company, the Dublin headquarter is the largest with potent managers, as C-suite leaders all based in the Dublin office. Thus, organisation-wide initiatives, programs and best practice usually are promoted and rolled out in this office first. This means that company culture, training and learning initiatives are articulated and initiated in the Dublin headquarter and then cascaded to offices across the globe. The reason why this is important that the Dublin-based management has the power and impact to implement changes across the organisation – and in the area of learning as well.

This study is investigating informal learning occurring in the Dublin office where I am based as well. Through conducting semi-structure interviews with participants from two different departments, I have gained insight on what employees mean by informal learning, what informal learning practices and initiatives they are engaged with, how they perceive the impact of informal learning on their professional development and whether informal learning is supported and recognised in the Dublin office. Experience about company culture and learning opportunities could be very subjective and also dependent on the role and the function an employee has. This would also explain why this study is an interpretive case study. For example, my perception about learning opportunities at the company could be different than those in technical roles. While the importance of continuous learning is much emphasised by management from time to time, I feel that I have to proactively go and find ways for further learning opportunities. There are functions of the organisation (such as Knowledge Management and Training, Finance, etc.) where employees' career path or learning plan is not well articulated, while for other functions, for example technical roles, there is a well-designed training plan available.

This is the reason why I have chosen to conduct interviews with employees from two very

different departments – to gain insights on a wider scale. Employees from the Quality Analyst and the Product Consultant practice have participated in the interviews because these two practices are quite different considering a role skill set and the scope of business as well. While Quality Analysts execute test cases and work mainly with the company's product, the software itself, Product Consultants liaise with clients on a daily basis and deal with various tasks, such as facilitating workshops, building relationships, or demonstrating high product proficiency.

3.5. Participant selection

While the company is operating globally, only employees within Ireland were considered to participate in this research. Different offices have different working and learning practices and cultural differences in learning also would serve as additional factors in the context of the case that is out of scope of this study. Another inclusion criteria is job tenure, as only those participants were selected who have successfully passed probation period, that means they are with the company for more than six months. This criteria is due to the fact that employees who are at the company for more than six months have insight and are experienced enough to share how things work around the company.

Participation in the semi-structured interviews was voluntary and first an e-mail was sent out to the Quality Analyst and Product Consultant practice leads to ask for volunteers to participate in the research, along with the research study information sheet. As only one response was received, further e-mails were sent out directly to employees within my professional network or those who possibly would participate based on managers' recommendation. Overall seven direct e-mails were sent out with purposive participant selection and six responses were received. Further correspondence was sent to those who responded to schedule the interview dates and times with the attachment of the information sheet and consent form. Six employees with two different departments and various roles were participating. Two interviewees were in a manager role, selecting them with the purpose to gather information on their perception and experience about informal learning within their team.

3.6. Data collection methods

This is a multi-method qualitative research, where semi-structured interviews and document analysis was used to collect data. Data collection strategy is established based on its appropriateness regarding providing enough information to answer the research questions (Merriam, 2002). The primary method of collecting data in this research is conducting semi-structured interviews with the supporting method of document analysis. This way, combining multiple sources of data would facilitate data triangulation in order to “seek convergence and corroboration through the use of different data sources” (Bowen, 2009).

Six interviews were conducted on different levels of the organisational hierarchy in order to get a more detailed picture about the learning practices and perceptions. First, members of different functional teams (Quality Analysts and members from Professional Services) chosen with purposive selection were invited to interviews. The other group that will be interviewed consist of team leaders and managers from the same functions of the organisation by using the same selection criteria. As interviews vary from being highly structured to completely unstructured, semi-structured interviews contain both question types. While the structure of the interview targets disclosing specific information, questions mostly serve as guidance through the interview without applying exact wording of the questions (Merriam, 2002). I have conducted semi-structured interviews (Appendix 3) that have the benefit to discover more than expected by covering gaps that may occur during the conversation and allowing a flexible wording and sequencing of questions. However, it could be challenging to build confidence and make participants comfortable in the situation. Also, flexibility might lead to different answers from different perspectives which makes responses less comparable (Johnson and Christensen, 2019). This could be addressed with well-structured interview questions and by discussing the different answers from multiple perspectives. This way, diverse answers could be expanded so that similar themes could be identified. Interviews were recorded and conducted online via MS Teams and a transcription was created to facilitate analysis and ensure confidentiality.

Document analysis is another major data collection method, where “documents could be

written, oral, visual or cultural artefacts. The strength of documents as a data source lies with the fact that they already exist in the situation” (Merriam, 2002, p. 13). Document analysis was carried out after the analysis of interview transcripts with the purpose to provide supplementary data, besides verifying findings from the interview analysis. As Bowen (2009) writes, “information and insights derived from documents can be valuable additions to a knowledge base” (p. 30). Bowen (2009) also brings an example for document analysis where a researcher used “newspaper reports, university policy documents, and department self-evaluation data to supplement data gained through interviews” (p. 30). Since there are thousands of company documents and artefacts available in the company intranet about various topics that are created by different departments across the organisation, document research was focused on the topics and keywords that emerged during the analysis of the interviews in order to provide additional knowledge. Because the company intranet is a platform with in-text searchability, just like Google, it makes it easy to find documents and posts relevant to a specific topic. The analysis included documents and artefacts in various formats, such as blog posts, policies, procedures, leaflets, presentations, and Word and Excel files. The used documents and other artefacts of relevance in this study contain company policies and documents related to company culture and behaviour, training strategies, educational policies, descriptions about company-wide learning initiatives, role descriptions and employee survey results.

3.7. Data analysis

According to Merriam, data analysis is “the process of making sense out of the data which involves consolidating, reducing, and interpreting what people have said and what the researcher has seen and read” (Yazan, 2015, p. 145). Data analysis, the evaluation of interviews and company specific documents was completed by thematic analysis. Thematic analysis “is a method for identifying, analysing, and interpreting patterns of meaning (‘themes’) within qualitative data” (Clarke & Braun, 2017, p. 297). Thematic analysis is based on the method of analysing qualitative data by generating codes and themes. Themes are basically “patterns of meaning” that emerge from codes that are “the smallest units of analysis capturing interesting features of the data” (Clarke & Braun, 2017, p. 297).

The interviews and the documents were analysed with Braun and Clarke's six-phase approach (Braun & Clarke, 2012). The first step of thematic analysis is getting familiar with the data. This involved watching back the recordings and rereading the interview transcripts. Before I have got immersed in the text, the transcripts were paired with the recordings in order to filter possibly wrong auto-generated transcription, such as those related to company specific words and phrases. As having read the transcripts, notes were taken to highlight potentially relevant pieces of information. These notes aided the process of analysis as they could serve as a basis for coding. In the second phase, when codes were generated, interpreting the data has been started in order to "identify meanings that lie beneath the semantic surface of the data" (Braun & Clarke, 2012, p. 61). This phase involved the systematic rereading and coding the chunks of data as I was moving on from one data item to another. To facilitate coding, I have created a two-column layout in a Microsoft Word document, copied the transcript into the left column and wrote codes in the right column of the page. The third step of thematic analysis is when themes are generated. This happens through reviewing, collapsing or clustering the codes throughout in order to identify areas of similarity "so that they reflect and describe a coherent and meaningful pattern in the data" (Braun & Clarke, 2012, p. 63). A mind map was created with themes to explore how they relate to each other and tell a story about the data with the aim to answer the research question. Step four is about reviewing themes and checking them against the coded data. If the themes work in relation to the data, themes should be reviewed against the entire data set and make sure they "capture the most important and relevant elements of the data, and the overall tone of the data" (Braun & Clarke, 2012, p. 66). Phase five involves defining and naming themes, deeply analyse them and summarise the very essence of the themes. In this phase, extracts are selected from the data set to support meaning making and interpretation of the data. The last phase of thematic analysis is writing the report and presenting the themes in a logical order to tell a coherent story (Braun & Clarke, 2012).

Thematic analysis is flexible, and by using this method the aim is to identify key patterns and themes across the data. This approach is beneficial to use when it comes to analysing participants'

different perspectives and generating insights (Nowell et al., 2017), which gives reasoning why thematic analysis will be useful in this study. Thematic analysis is also applicable for large and smaller datasets. Case studies with a few participants can be analysed with this approach as effectively as a series of interviews with a larger sample (Clarke & Braun, 2017).

3.8. Positionality

Social or educational research is usually value-laden, therefore researchers have to practice self-reflection to acknowledge, disclose and critique their part and influence in the research. This self-reflection informs positionality, the ability for the researcher to locate their views and beliefs about the subject, the research participants and the research process (Holmes, 2020).

Bias may arise from the researcher's preconception, previous experiences, beliefs and motivation. Being a trainer and a former team coach in the technology industry provided me with the experience to observe how people work and learn while working, to identify strategies that facilitate learning and acknowledge the organisational deficiencies that exist through the everyday operation and thus, influence learning practices. I saw various strategies that affect formal or informal learning in the workplace and I believe there is always room for improvement in this area. I see the importance and the need for informal learning to occur in my current role as well, as a trainer at the company in this case study.

According to my perception, informal learning at the workplace either occurs through interactions with peers, unstructured learning events or is initiated by the learner in the form of self-directed learning and it is triggered by different motivations, such as lack of knowledge about something, interest in the topic, etc. Informal learning is a highly important factor for organisational growth and it is imperative to occur if a company aims to keep its competitive advantage. I believe that the organisation in question emphasises the importance of formal learning, however – despite the fact that it is crucial –, informal learning is not stressed enough.

Having an insider's perspective in the research project has its benefits and drawbacks as well. Knowing company specific language and phrases or a first-hand experience about company culture is

advantageous, however, bias and incapability to detach myself from the case that is being researched are serious threats to research quality. As a researcher and an employee of the company in question I had easier access to company specific policies and other documents that are subject to the document review process, and better accessibility to research participants. While contacting interviewees was easier, I had the feeling that sometimes they are less willing to provide honest answers or open up in sensitive topics such as manager behaviour or organisational deficiencies. Interviewees might have found it easier to have an honest discussion with an outsider who they will not have any contact in the future than with a trainer from the Knowledge Management and Training department. Also, I believe that confidentiality and anonymity might have been a matter of concern for participants and I have always addressed the importance of those before the interviews had started.

3.9. Ensuring quality

Trustworthiness is important so that research projects are considered legitimate and useful. Lincoln and Guba (1985) established four criteria to evaluate trustworthiness, that are credibility, transferability, dependability and confirmability.

Credibility, the confidence that the findings are true can be addressed by several techniques, such as prolonged engagement or member checking (Lincoln and Guba, 1985). Prolonged engagement is addressed by the fact that I am an employee of the company in question for almost three years and I had the opportunity to spend enough time to build trust, understand the company culture and the setting employees are working at. I have also developed relationships to become familiar with employees' views on certain topics from different perspectives.

Transferability suggests that the findings are generalisable and could be applied to other contexts, which will be achievable by providing thick descriptions about the case (Lincoln and Guba, 1985). While I intended to provide thick descriptions about the case, a more extended, mixed-method case study would have suggested greater transferability.

Dependability shows that the research is constructed in a logical way, it is consistent and could be repeated (Cohen and Crabtree, 2006). Audit trail is a great technique to record the steps through

the research process and demonstrate the development of the findings to ensure dependability and confirmability as well.

Confirmability refers to the degree to which the findings are based on the inquiry and not on the researcher's bias. Audit trail and member checking are techniques to ensure neutrality in the research study. Another technique to address confirmability is triangulation of multiple sources which examines consistency of different data sources by using the same method (Cohen & Crabtree, 2006).

3.10. Ethical considerations

This research study was conducted in adherence to NCI Educational Research Ethical Guidelines. An Ethics Form was submitted to and approved by the NCI Ethics Committee before the research has been started.

Participation in this study was voluntary and confidential. Interviewees had the right and opportunity to withdraw consent to participate in the study at any point. In order to make sure participants are well-informed to participate in the study, an information sheet about the research and a consent form was sent out. All consent forms from the six interviewees had been gathered and signed before the interviews commenced.

Recordings were destroyed after transcripts were created. Anonymised transcripts will be stored in a secure cloud storage of National College of Ireland. In order to maintain anonymity, participants were named as QA Participant 1, QA Participant 2, QA Manager, PC Participant 1, PC Participant 2 and PC Manager. All collected and stored data is in compliance with GDPR regulations.

4. Conclusion

This chapter outlined how the research study was conducted, going into details about the philosophical underpinnings, research design, methodology, data collection and analysis, positionality, quality and ethical considerations. The results and findings of the data analysis carried out by thematic analysis are discussed in the next chapter.

Chapter 4: Findings and Discussion

4.1. Introduction

In this chapter, the results of thematic analysis carried out on the transcripts of semi-structured interviews and company documents are presented and contextualised in relation to the wider literature. The aim of the analysis was to discover meaningful themes that address the research sub-questions and tell a story about the gathered data. The four main themes that emerged through the analysis provide insights to the following questions.

- What does informal learning mean to employees?
- What informal learning practices are they engaged with online and offline?
- What is the perceived impact on their professional development?
- How are they supported in their engagement in informal learning?

The findings of thematic analysis carried out following the semi-structured interviews are presented in this chapter, integrated with the results of the analysis of company specific documents, structured based on the themes emerged throughout.

4.2. Overview of Key Themes

Four main themes and seven subthemes were the result of the thematic analysis based on Braun and Clarke's (2012) method and are discussed in the following order: Understanding informal learning, Professional learning in a remote environment, Impact of informal learning on professional development, and Perceptions about promoting informal learning. Understanding informal learning refers to employees' definition about informal learning and the activities they associate informal learning with. Professional learning in a remote environment discovers the effects of remote working has on professional learning and the importance of structured remote trainings based on employees' perception. The impact of informal learning on professional development theme discusses how informal learning affects employees' career progression at the company from the interviewees'

perspective. Perceptions about promoting informal learning explores participants' perceptions about how informal learning is recognised and supported at the company by management.

4.3. The meaning of informal learning

This theme explores what informal learning means to participants and how they would define it. Key concepts about the essence of informal learning are discussed in this section, along with the learning activities participants engage in regularly that fall under the notion of informal learning. Perceptions about knowledge sharing will also be discovered in this section, as sharing and circulating information within a team is a key activity that facilitates informal learning.

4.3.1. Defining informal learning

During the interviews it became clear that participants have different ideas and meaning about informal learning, however, some common concepts emerged during the discussions with participants. The first concept that occurred from time to time is the unofficial nature of informal learning. Participants referred to informal learning as “not official classroom based” learning or learning that “doesn't follow a structure”. The other concept about informal learning was that many times it facilitated or assisted by a more experienced colleague, for example, as a Quality Analyst put it, “they weren't trainers, they were just guys who are really familiar with the topic and just showed us how to do it”. A manager from the Quality Analyst (QA) practice summarised as “I suppose learning from other people, maybe more senior people”. A manager from the Product Consultant (PC) practice, however, identified informal learning with on-the-job learning,

“Informal learning to me just means on-the-job. That are the skills and knowledge you're picking up as you are actually working rather than training courses or specific training materials. So yeah, on the job training, I suppose, or being put to work and picking up skills and knowledge as you go through the process”.

This definition resonates with Dale and Bell (1999), who understood informal learning as learning related to an individual's performance of the job without being structured into a programme.

Another concept that occurred about informal learning is self-directedness. A Product Consultant summarised that informal learning

“is not face to face, is something that is probably online and it might have to do with the fact that you don't need your manager to sign you to it. You get your own initiative, go and do it. So, say I want to learn better Excel. I'll go on online, search my own resources to a bit of training online, but it will be only by myself.”

While all participants have an idea about informal learning, company documents do not make an attempt to interpret informal learning. The only place informal learning is mentioned is the value proposition of the company, where four main values are discussed. One of the main company values is information, and the importance of information is stressed in the value statement. They emphasise the importance of updating knowledge and skills and prioritising learning in order to show exceptional performance. It is stated that employees connect and collaborate to share feedback and knowledge and to facilitate informal learning. While informal learning is mentioned in one segment of the company values statement, authors do not discuss what they understand by informal learning. Informal learning is articulated on a philosophical level, but it is not realised in an action plan or mentioned and discussed in any other documents or learning and training strategy, which presumably suggests that informal learning is not a key component in the company's employee developmental strategy.

When trying to find the different meanings of informal learning, I had to solely rely on participants understanding, without having an input from senior management. Summarising the key concepts that emerged from the interviews, participants understand informal learning as unofficial, unstructured learning events that occur on-the-job and is often facilitated by peers or one's own in the form of self-directed learning. Including self-directed learning to the notion of informal learning resonates with the conclusion that was drawn based on literature review that suggests informal learning is shaped by on-the-job interactions where learning from others is key. Informal learning is also unstructured and usually learner initiated where self-direction has central role and needs to be conscious in order to be effective.

4.3.2. Informal learning in practice

Informal learning has many forms in the organisation in question, and while participants define informal learning differently, they have highlighted more or less the same activities they engage in as part of informal learning. All participants mentioned shadowing or a form of learning from peers, either online or in person if they have the chance to. These activities are closely tied to the concept of learning on-the-job because the complex, constantly evolving nature of the company's product requires employees to be well informed all of the time, especially in the Product Consultant (PC) practice, where they have to liaise with clients on a daily basis. As a PC manager has expressed,

"I'm not the most technical and I'm not really up there, but I suppose it is keeping me on my toes, having to keep up to speed on how the technologies evolving and what it all means and being able to talk to clients about that. [...] It's all coming down to experience, knowledge on the job, picking up information".

Interviewees also revealed that they engage in self-directed learning activities as part of informal learning. One such activity is using the company's internal platform (intranet), which contains user manuals, tutorials, video recording and many other helpful materials and is very useful in terms of searchability as well. Google is another tool that is used to facilitate self-directed learning to understand concepts that employees are not familiar with yet. A Product Consultant highlighted the effectiveness of this type of self-directed learning:

"The process of going to find the information is how I find I'm learning best. If you were to ask me a question from the client's point of view and I don't know the answer, but I go and find the information for you and then learn it myself because I've had to get you the answer. I know that information going forward then that's when the information sticks with me."

As a result of the document analysis, practices of informal learning have emerged. In the Training Programme Strategy, it is clearly stated that the company's training programme encourages self-learning. The Knowledge Management and Training department highlights that one of its purposes is to support employees' on-the-job training through providing trainings internally. In their mission statement it is emphasised that it is imperative to deliver exceptional, tailored Learning Programmes that is facilitated by a team of Subject Matter Experts. Through the analysis it was found that the

company has a mentoring programme, which is also a form of informal learning (Garrick, 2012), however, has not been mentioned by interviewees at all. Mentoring is defined in one of the company specific documents as a sharing and collaborative relationship that most often occurs between a senior and junior employee for the purpose of the mentee's growth, learning, and career development. The idea behind mentoring relationships is that the mentor wishes to pass on some of what they've learned to someone else who will benefit from their experience and knowledge.

What is clear from the analysis is that informal learning activities that usually occur at the company are through job shadowing or learning from more experienced peers, learning on-the-job and through self-directed learning. This is in line with participants' interpretation about informal learning, because they have defined it through these activities. While mentoring is called out as a possibility for growth, learning and career development, participants have not related it to a form of informal learning. The literature review outlined that informal learning takes place in the work context (Dale & Bell, 1999) and include self-directed learning, networking, coaching, mentoring, performance planning (Garrick, 2012) and activities that are linked to learning from others (Marsick & Watkins, 2001; Eraut, 2012). A typical form of these activities that was also mentioned by the participants is job shadowing that provides them an opportunity to observe more experienced peers while working. While peers and on-the-job interactions play an important role in informal learning at the workplace, it was also highlighted that the individual has a greater role in informal learning (Eraut, 2004). This resonates with the remarks of Cunningham and Hillier (2013), who came up with a comprehensive explanation about informal learning activities by suggesting that informal learning is usually learner initiated, involves action and results from on-the-job interactions.

4.3.3. Knowledge sharing online

Knowledge sharing could be understood as an action of learning informally, however, beyond learning it has many benefits for an organisation, such as increasing employee engagement, stimulating career development, thus, contributing to competitive advantage (Juan et al. 2018). Haas and Hansen (2007) distinguished two types of knowledge sharing, through direct contact between

individuals, and through written documents, both paper and online. Digital tools and online applications allow to merge the classic knowledge sharing types, because everything happens online, especially in a remote centric working model.

Participants from the Product Consulting practice mentioned that knowledge sharing is facilitated by Microsoft Teams conferencing application within their teams, especially to ask questions and circulate new information. However, a manager from the practice highlighted that sharing information within a team is difficult and the application is not too efficient from a knowledge sharing perspective, while he also mentioned that information could be shared in a more transparent way through the company's intranet. Team members from the same practice shared that active participation in knowledge sharing initiatives is difficult because of heavy workload. Two members from both practices mentioned that information is not well circulated within their teams, and also a manager from QA practice admitted that it is difficult to make sure the information is properly distributed because the company is constantly evolving. Despite these challenges, they have introduced regular fortnightly knowledge sharing sessions within their practice, and also regular catch ups and synchronisation sessions on a team level to ensure information is well circulated.

While some of the analysed documents mentioned the importance of knowledge sharing, the documents have not discussed best practice about knowledge sharing procedures or utilising online tools that facilitate knowledge sharing. Company values, the company behavioural framework, and also regular communication from management promote knowledge sharing but there is not any document or policy in place that would provide any concrete advice or set clear expectations on how efficient knowledge sharing would look like.

As it was outlined in the literature review, the use of digital tools and informal networks strengthen the social characteristics of workplace learning (Milligan, Littlejohn & Margaryan, 2014). However, as Caruso (2016) pointed out, and also confirmed by the participants during the interviews, employees do not share their knowledge and expertise with their peers by default, suggesting that improving performance and knowledge sharing practices are shaped by organisational culture. In

order to encourage knowledge sharing between employees, for example, screencasting or multimedia content could be used (Caruso, 2016). Digital technology has its advantages on the learners' side as well as it enables them to personalise their learning space, provides flexibility regarding the time and pace of learning progress, enhances group learning and real-time performance support (Li & Herd, 2017).

4.4. Professional learning in a remote environment

This theme discusses how professional learning occurs in a remote environment in order to gain insight about online forms of professional learning. It discovers participants' perceptions about the effects remote working have on learning, and also explores the importance of online structured learning events based on participants' views.

4.4.1. *Effects of remote working on learning*

The majority of interviewees found learning remotely more difficult than learning face-to-face, whether it is learning from peers, classroom-based learning, hands-on training or soft skills training. One of the main concerns that were raised about online learning is that it could be time consuming due to possible misunderstandings, because it is easier to clarify and resolve issues in person. A team member from the QA practice has started working during the pandemic and found learning on-the-job especially difficult in a remote environment:

“It was fine, but I know for a fact that if I was in the office, I think it would have been a hundred times easier because, I feel like if I was in the office, I could have stepped aside someone and I could have shadowed them kind of throughout the day, whereas I was just doing calls here and there with a few random people on the team. We did like a ten-minute call and they showed me something really quickly, but then they'd get off. And then I kind of just be left for the first, I think it was the first two weeks when I'm joining QA, I was given a QA manual.”

From the interview it became clear that the employee felt kind of neglected when starting the role and was struggling with learning on-the-job remotely. The interviewee later explicitly said that remote working hindered effective learning and finds hands-on learning in person more helpful than remote learning.

A manager from the PC practice has also emphasised that the reason why they find remote working and learning difficult is that having a go-to person was critical for them in the beginning. At the same time, interviewees reported that the remote environment fostered getting engaged in self-study as face-to-face learning events and personal interactions became impossible to maintain because of the pandemic. Interestingly, most interviewees have also pointed out that in the new, hybrid working model they do not plan too much work when going to the office as they get often distracted by other people, and they actually get more work done when working from home.

While learning remotely was challenging for many, there have been also benefits highlighted during the interviews, such as the flexibility and accessibility of online courses. A team member from the PC practice found virtual, recorded sessions especially useful, as they are searchable and accessible for future reference.

Effects of remote working on learning appeared in the results of the Employee Pulse Survey, which was in line with the interview participants' experience. The survey revealed that employees prefer face-to-face trainings over remote sessions, however, when it comes to virtual training, interactivity is key. Recorded videos without any interaction is the least preferred training format according to survey respondents. It was also called out that more job shadowing would be required, even remotely. Another respondent highlighted that more training would be needed to learn the role, because currently the employee is learning on-the-job.

Employees' overall perception about remote learning is that it is less effective than face-to-face training and learning becomes particularly challenging when it comes to learning on-the-job. The main benefit of remote learning is flexibility, accessibility and the ability to foster self-directed learning.

4.4.2. Importance of online structured learning events

Participating in formal trainings regularly is usually part of the evolution of a role at the company. When people join the company, first they are enrolled on the induction programme, which is followed by a product training about the software. These are mandatory trainings for new joiners

in order to provide an overview about the product and the industry it operates in. Later on, there are many role specific and more general trainings available for employees from different areas of the business. The form of these learning opportunities varies as well: there are e-learning courses, video recordings, virtual and occasionally in-person instructor-led trainings.

Interviewees usually engage in formal training activities, however, they shared different views on the significance and relevance of these trainings. A PC manager said that hands-on practice and learning on-the-job give the core learning about a role, while formal trainings only supplement these and are less valuable. Interviewees from the PC practice also told that the internally available virtual and e-learning trainings are limited from the perspective of a role in the PC practice because they usually focus on one aspect of an area. A PC team member also said that internal company trainings are beneficial to gain a foundation of knowledge. This also resonates with the team members from the QA practice, who told that internal e-learning courses are too broad, too generic, and some courses miss practice.

As part of learning, employees are usually engaged with other, externally accessible e-learning materials, such as Pluralsight or LinkedIn Learning courses. These are structured courses, however, employees enrol themselves in order to deepen their understanding of a certain area, perform better in their role or develop their soft skills. Members of the PC practice said that are usually engaged with LinkedIn Learning and Pluralsight courses, while a Quality Analyst told that Pluralsight courses are more practice based.

Participants also highlighted some good learning initiatives from the Knowledge Management and Training department of the company. These are structured learning events, however, they are non-formal in a sense that they provide learning possibilities for participants beyond the aims and learning objectives of the session, and participants are able to learn from one another, not only from the presenter. Interviewees emphasised that Powerhours, Lunch and Learn events, Storytelling Clinics or events like Innovate 22 were initiatives that they liked because they were beneficial and brought teams together to collaborate.

The importance of online learning was also found through the document analysis. As it is often emphasised by the Knowledge Management and Training department and is stated in the curricula, online learning is encouraged at the company in the form of flexible learning programme delivery: traditional classroom-based, remote or on-demand e-learning content is available for employees to engage in professional development. Blog posts by the members of the Knowledge Management and Training department regularly draw attention to the wide range of online learning possibilities, such as the internal company learning management system, Pluralsight, LinkedIn Learning or AWS trainings accessibility. Blog posts are also published to promote in-house virtual learning initiatives, such as Customer's Objection Handling, Storytelling Clinics, PowerHour, Lunch and Learn and the Innovate 22 competition.

Objection Handling is basically scenario-based learning where employees are able to learn while grouped in fictional project teams working on real world customer scenarios. Senior, more experienced employees with customer-facing experience are tasked with asking difficult questions that clients would typically pose. Afterwards, those in project teams get feedback on what worked well, how the "client" might have handled those questions and how those requirements were actually implemented in project. Objection Handling is a great way of learning about the product, dealing with difficult questions and getting feedback from Subject Matter Experts how they typically handle these situations.

The Storytelling Programme is also a scenario-based learning initiative, which is more related to challenges from the Product Consultants' practice. These scenarios usually focus on a particular aspect of the company's product, where PCs have to provide answers to real-life customer related problems. In order to provide the full context of the story, it was important to understand the reasons behind certain reactions. It was crucial that participants understood the negative consequences that the client was experiencing and the positive business outcomes they were hoping to achieve with this solution.

PowerHours are fortnightly run sessions hosted by different offices across the globe with the aim to facilitate knowledge sharing among employees. These are thematic sessions where presenters share expertise and experience across a wide range of topics. The Lunch and Learn series are also focused on particular issues, such as collaboration between different functions of the organisation. Innovate 22 was a recent new initiative to promote collaboration, innovation and problem solving across the organisation.

While the internally available course offering is growing, it can be said that interviewees find learning on-the-job more valuable. They are also more engaged with initiatives that support scenario-based learning, as these learning events promote providing feedback and creative problem solving, where experience are shared by colleagues and more experienced peers which is highly beneficial for them. While exploring online structured learning events are not closely related to the main research question, it was still beneficial discovering it because it revealed useful implications for future organisational learning strategies.

4.5. Impact of informal learning on professional development

This theme discusses how informal learning affects employees' professional development and career progression from the interviewees' perspective in the Quality Analyst and Product Consulting practice. The importance of a peer in professional learning was emphasised when this theme has been emerged, and employees also shared their experience about mastering a role by learning informally.

Learning from peers, shadowing senior colleagues, observing other employees while working had critical importance for most interviewees especially when they had started in their role. As the manager from the PC practice put it

“When I first came in, I was very much just assigned to another product analyst and worked with him and learned his way of doing things. Used his materials. You know, he was the person I went to with all my questions and he helped me validate my understanding”.

A quality analyst had similar experience: “When I have moved into this role, I'd be calling a person on my project that I was shadowing and like, you know, she was able to explain to me over the phone,

certain things". These experiences show that learning from a more senior colleague is crucial at the beginning, when new joiners are going through an intense training period with a heavy load of information until they start to feel comfortable and more confident in their role.

Peers, however, not only have high importance at the beginning, but throughout someone's life at a workplace. Interviewees reported that informal chats are imperative to stay up-to-date. An employee from the PC practice said that actively contacting colleagues for new information is part of the everyday work, while a QA manager explicitly said that informal conversations are needed in order to understand the company's complex product: "Because the software of the company is getting constantly developed, Quality Analysts have to learn all the time". The necessity of constant learning keeps employees develop professionally and potentially could serve as a motivational factor in learning.

The need for constant learning also fosters self-study. According to a Product Consultant, self-study is highly advantageous because it leads to better performance, which is beneficial in a role and indirectly contributes to get promoted and brought a concrete example for that:

"I like to explore things [...] I'm going online, I'm going to the user guides that they're for APIs [...] And I'm pushing myself in a sense to fully understand how this works [...] it just came up as an extra skill when it was needed for the client. I was able to take calls or help the client not only from the functional side, but this one as well. I was able to go on calls with solution architects and fully understand what they need. [...] So this is how it helped me a lot when it comes to my career. And I think that was also an important indication and factor and that helped to my promotion that I show willingness to learn and explore new stuff."

Continuous learning was one of the key concepts that emerged during the document analysis. The Career Pathways document includes the tasks and activities that employees can undertake to take ownership of and progress their career to the next level. One of the five areas is domain expertise which can be achieved by possessing role specific skills and promoting continuous learning.

The Product Consultant job description discusses that it is a client-facing role which requires Product Consultants to work closely with clients to clearly understand their challenges, at the same time they are required to facilitate workshops, give presentations and demonstrate a high degree of product proficiency. They also have to serve as a key point of contact for the client throughout the

project delivery, build strong relationships, work closely with other departments at the company and also provide support and mentoring to junior team members. They should engage in and support new initiatives on driving best practice and support knowledge sharing within the practice of relevant topics. Product Consultants have to keep their knowledge up-to-date about the company's product and the industry, while having a pivotal role in the company's client communications. From these requirements it is clear that the Product Consultant role involves various skills to be demonstrated while being constantly up-to-date, which would result in being engaged in continuous learning. The need for Product Consultants to learn continuously is not an implied practice, or a 'nice-to-have' attitude, but it is stated explicitly among the key competencies: they have to be proactive in seeking out internal and external material to improve product and industry knowledge.

Quality Analysts are required to write and execute test cases for new and existing applications and projects. They ensure that all testing activity is appropriate and relevant to the functionality under development and the intended business use of that software. According to the Functional Pathway document, Quality Analysts also have to demonstrate product knowledge among key competencies which manifests in being proactive in searching for internal and external material to improve product knowledge and that they can be relied on to mentor and train colleagues on the company's product, QA product and process.

This way, informal learning has positive effects on someone's career because performance is one of the main indicators of how work can be measured, and criteria related to continuous learning is included in the yearly performance review for the roles discussed above. Improving performance, thus informal learning is not only important from the employees' perspective, for example in order to reach career milestones or improve employability (Dale & Bell, 1999), but also from the organisation's perspective to contribute to production, effectiveness and innovation of the business (Boud & Garrick, 2012). A PC also mentioned that getting engaged in informal learning shows ambition which is more valuable than possessing skills. Most interviewees concluded that informal learning is essential and needed in their role.

4.6. Perceptions about promoting informal learning in the organisation

This theme explores participants' perceptions about how informal learning is recognised and supported at the company by management. Support could be any verbal or written encouragement to engage in informal learning, while recognition is a result of admitting the relevance and importance of informal learning in any form.

4.6.1. Supporting informal learning

Managers who have participated in the interviews agree that informal learning is supported and encouraged at the company. The manager from the PC practice said that informal learning is supported until someone is new in their role, but after someone is getting comfortable in their role, informal learning is not actively promoted. This resonates with one of the Product Consultant's view that informal learning is supported only to an extent. The QA manager added that both formal and informal learning is encouraged at the company. A Product Consultant appreciates that there is flexibility at the company about learning and that learning in general is not micro-managed. However, the interviewee emphasised that more involvement from management is desired in employees' learning plan, also dedicated hours for learning would be needed. The lack of the availability of dedicated hours related to informal learning seems to be a problem across the department. The manager from the PC practice told:

“And the supporting of informal training. So, when I spend time with people trying to get them up to speed and train them, I'm like, ok, what do I book my time against? You know, like, we have that balance we have to manage, I suppose.”

Quality Analysts reported similar experience from their department. A QA said that when they have downtime, doing training is encouraged from management, but they would need guidance on what to learn and have a designated learning path supported by management. Another Quality Analyst reported that informal learning is expected from employees at the beginning, when they are new in their role, to get up to speed. At the same time, additional learning that is not closely related to role is not really supported.

The results of the employee pulse survey also show lack of time when it comes to learning. Thirty-four percent of the employees share the concern that they do not have enough time to participate in trainings, and some point out that they miss dedicated training hours from management. Management, however, strongly emphasises the importance of a learning culture, which is demonstrated by the Educational Assistance Policy in place. As part of promoting a learning culture, the company supports employees who would like to undertake external programmes or courses that are relevant to their role. Management also highlights in several internal blog posts that they provide multiple tools to upskill as well as financial supports for external courses.

While management communicates that job-related learning is supported at the company, employees' experience about supporting learning is not as unequivocal. Most interview participants claim that informal learning is supported, what is more, expected especially in case of new joiners, at the same time they think learning is not well managed; there is a lack of time and structure when it comes to employees' learning plans.

4.6.2. *Recognising informal learning*

According to one of the Quality Analysts, management does not allocate time for informal learning which could be interpreted by the interviewee that informal learning is not recognised on an administrative level, and employees cannot log time against it. All interviewees shared the opinion that informal learning is not recognised enough or not at all at the company, and when it comes to shadowing and training new employees informally, a Quality Analyst mentioned that "it's probably not recognized how much effort maybe goes into supporting a new member of the team to get upskilled".

During the document analysis, recognising informal learning as a theme has not emerged, however, learning in general is recognised in one of the company processes. In the yearly Performance Review, employees have to report how they demonstrate the core competencies while working. One of the competencies that employees are measured by is knowledge sharing and

learning. Employees have to self-evaluate, which is a good opportunity to show management their progress in learning and could be an eye-opening if learning engagement is lagging behind the expected.

4.7. Conclusion

The aim of this chapter was to evaluate the results and present the findings of the interviews and the analysed documents with related literature. The research answered the questions related to employees' understanding about informal learning, the informal learning practices they engaged with at the workplace, and the impact of informal learning on their professional development. The study also provides an answer to what extent informal learning is recognised and supported at the company. In the next chapter, a conclusion to the study will be provided along with the limitations and recommendations for future professional learning strategy.

Chapter 5: Conclusion

5.1. Introduction

This chapter details the conclusions of this study based on the research question *how do employees in a financial software company perceive informal learning and its impact on their professional practice*. The underlying issue of this question is that informal learning practices are not particularly emphasised at the organization in question. In order to reach a conclusion, experiences of employees from different departments of the software company were explored through semi-structured interviews and document analysis was carried out to get a comprehensive, more detailed understanding about the case. Through the thematic analysis of the data, four main themes were found that address both the main research question and the sub questions:

- Explore the meaning of informal learning for employees
- Informal learning practices they are engaged with online and offline
- The perceived impact of informal learning on professional development
- Perceptions about the support and recognition of informal learning in the organisation

This chapter discusses how themes have provided answers for the research questions, and an overall conclusion about the topic will be drawn, and this chapter also explores the limitations of this study, implications for practice and recommendations for further research.

5.2. Overall Conclusion and Contribution

This study aimed to explore how employees in a financial software company perceive informal learning and how informal learning affects their professional development. There are four sub-questions formulated altogether, that expand on the main research question. The individual findings structured by themes are discussed in the previous chapter. In this section, an overall conclusion is presented by linking the findings directly to the research questions, thus, providing a more structured and comprehensive summary.

The first research question in this study addressed the definition of informal learning and intended to explore what employees mean by informal learning. Following the thematic analysis of the data gathered through semi-structured interviews, employees see informal learning as a concept for unstructured learning events that occur on-the-job. By their definition, informal learning is often facilitated by peers or is initiated by employees themselves in the form of self-directed learning. This concept resonates with the conclusion that was drawn based on literature review, which suggests informal learning is shaped by on-the-job interactions where learning from others is key. The literature review also concludes that informal learning is unstructured and usually learner initiated where self-direction has central role and needs to be conscious in order to be effective.

The second sub question addressed informal learning in practice and aimed to discover concrete learning activities that employees engage in when it comes to informal learning, also considering the remote working conditions. From the thematic analysis it has become clear that informal learning activities at the company usually occur in the forms of job shadowing or learning from more experienced peers and self-directed learning. The literature review outlined that informal learning occurring in the work context include self-directed learning, networking, coaching, mentoring, performance planning (Garrick, 2012) and other activities that are linked to learning from others (Marsick & Watkins, 2001; Eraut, 2012). Job shadowing that was mentioned by participants is beneficial for them in terms of providing an opportunity to observe more experienced peers while working. Remote working environment, however, made it difficult to observe and learn from more experienced peers. At the same time, interviewees reported that working remotely fostered getting engaged in self-study as face-to-face learning events and personal interactions became impossible to maintain because of the pandemic, however, it would have been desired.

Knowledge sharing could be also interpreted as a form of informal learning, which is facilitated by Microsoft Teams conferencing application within the organisation to raise questions and circulate new information. However, according to employees, the application is not too efficient from a knowledge sharing perspective, and information could be shared in a more transparent way

through the company's intranet. Participants also told that sharing information within teams is difficult and information is not well circulated. In order to cope with these challenges, some teams have introduced regular knowledge sharing sessions, catch ups and synchronisation sessions within their practice to ensure circulation of information.

The third research question aimed to explore the impact that informal learning has on employees' professional development. Based on the experience of interview participants, learning from a more senior colleague is crucial. First at the beginning, when new joiners are going through an intense training period with a heavy load of information, and later, when they are more comfortable and confident in their role but in order to keep up-to-date they have engage in informal conversations with peers. Self-study is also critical, because it leads to better performance and contributes to get promoted, as it was pointed out by an interviewee, but most employees agreed with the fact that informal learning is essential and needed in their role.

The last research question was raised to reveal employees' perception about supporting informal learning at the workplace. The question aimed to explore how informal learning is supported and recognised by senior management. Most interview participants agreed that informal learning is supported to an extent, what is more, expected, especially when someone is new in the role. After a while, however, supporting informal learning gradually decreases, and management does not allocate time for informal learning which could be interpreted as informal learning is not recognised on an administrative level. All interview participants shared the opinion that informal learning is not recognised as enough or not at all, and when it comes to shadowing and training new employees informally, the effort that is put to upskill a new member of the team is not recognised either.

5.3. Limitations

Because the fact that this is a qualitative case study, it has its limitations, especially in terms of generalisability. While I have strived to provide a thick description about the case and the organisational context and applying varied research methods such as focus groups, or an

organisation-wide survey would have added more richness and quality to the findings of this study. A mixed-method approach would have added to the neutrality of the study by bringing in quantitative methods to support extending current findings, but unfortunately it could not have been carried out because of time constraints. At the same time, I believe that applying a multi-method approach by the triangulation of multiple sources ensured confirmability in this study (Cohen & Crabtree, 2006).

The other reason why generalisability is considered a limitation of this study is that this is a single case study about an Irish software company, and the findings cannot be applied to other contexts, however, there could be patterns of informal learning practices that could be applicable to other technology organisations but that would be subject to further research.

5.4. Recommendations for further research

The findings of this study might be useful for researchers and learning professionals planning to investigate informal learning practices in companies with similar profile and organisational culture. Based on the findings of this research, there are also sub themes that would be worth to further explore. The topics that could serve as a basis for further research are for example, knowledge sharing processes in a particular function of the organisation, employees' engagement with online training courses, or cultural factors that help supporting informal learning.

5.5. Implications and recommendations for practice

While this study has limitations in terms of generalisability, the findings outlined certain areas of implications that could be considered for practice. Based on the findings of this study, three recommendations seem to be forming that should be taken into consideration by senior management, HR, and learning professionals.

The first area is about strengthening structured and unstructured forms of knowledge sharing. While there is a mentoring programme in place at the company, and it is called out as a possibility for growth, learning and career development, it is not emphasised enough, and employees are not necessarily aware of it or take it to account when it comes to means of informal learning.

Structured company initiatives such as Objection Handling or Storytelling Clinic have positive reception among employees because these initiatives support scenario-based learning, promote providing feedback and creative problem solving where core knowledge and experience is shared by more experienced peers which is highly beneficial for them. Maybe the company in question should reinforce these types of initiatives as they seem particularly useful for knowledge sharing.

Beyond learning, knowledge sharing in general has many benefits for an organisation, such as increasing employee engagement, fostering career development, thus, contributing to competitive advantage (Juan et al. 2018). However, as Caruso (2016) pointed out, and also was confirmed by the participants during the interviews, knowledge sharing is difficult, and employees do not share their knowledge and expertise with their peers by default. The reason why it is concerning is not only the lack of getting employees informed about important updates, but according to a research, the use of digital tools and informal networks strengthen the social characteristics of workplace learning (Milligan, Littlejohn & Margaryan, 2014). In order to implement change in this area and improve knowledge sharing practices, organisational culture should be transformed.

The second area that should be reconsidered is optimising the learning and training strategy. This means improving the online course offering and fostering on-the-job learning. Hands-on practice and on-the-job learning are the most valuable according to participants in this study. Formal trainings provide a good foundation of knowledge, but in many cases are considered to be too broad, generic and miss practice. E-learning courses and face-to-face training only supplement on-the-job learning, as learning on-the-job is considered to provide core knowledge that is essential for the job.

Employees, however, found online learning more difficult than learning face-to-face, whether it is learning from peers, classroom-based learning, hands-on training or soft skills training. It is especially challenging when someone is new at the organisation and does not anyone they can engage with face-to-face. For this reason, job shadowing would be more than desirable for employees, even remotely. Employees' overall perception about remote learning is that it is less effective than face-to-face training and learning becomes particularly challenging when it comes to learning on-the-job.

The main benefit of remote learning is flexibility, accessibility and the ability to foster self-directed learning.

The third area is about considering extending the importance of informal learning in the performance review process. Since criteria related to continuous learning is partially included in the yearly performance review in the form of demonstrating knowledge sharing and learning, and performance is one of the main indicators of how work can be measured, informal learning has positive effects on employees' career. Improving performance, thus informal learning is not only important from the employees' perspective (Dale & Bell, 1999), but also from the organisation's perspective to contribute to production, effectiveness and innovation of the business (Boud & Garrick, 2012). Recognising the importance of informal learning by including it in the performance review more extensively would bring a company culture where the days spent in the workplace are defined by employees seeking informal learning opportunities. This way, managers would also restructure employees' learning plans and employees would take advantage from a more supportive learning environment.

5.6. Conclusion

This chapter presented an overall conclusion of the research along with the limitations of the study, included recommendations for future research, and implications for practice. The aim of the research was to discover informal learning and its perceived impact on employees' professional development at an Irish software company. This was addressed through four objectives and was carried out through conducting semi-structured interviews and document analysis. During conducting the interviews and having carried out a document analysis contributed to gain a more thorough understanding about the different functions of the organisation, their learning practices and challenges in learning. Conducting this research and concluding the findings provided me with a deep understanding about the notion and perception of informal learning, the related practices and its significance in professional development. This research has also contributed to my professional

and personal development, as this project seemed to be challenging at times, but will benefit me in future endeavours.

References

- Billett, S. (2014). Mimesis: Learning Through Everyday Activities and Interactions at Work. *Human Resource Development Review*, 13(4), 462–482.
- Boud, D., & Garrick, J. (2012). Understandings of workplace learning. In: *Understanding learning at work* (pp. 1-11). Routledge.
- Bowen, Glenn A. (2009). Document analysis as a qualitative research method. *Qualitative Research Journal*, 9(2), 27-40. DOI 10.3316/QRJ0902027
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77-101. <https://doi.org/10.1191/1478088706qp063oa>
- Braun, V., & Clarke, V. (2012). Thematic analysis. In H. Cooper, *APA Handbook of Research Methods in Psychology Vol. 2. Research Designs*. American Psychological Association.
- Caruso, S. J. (2016). A foundation for understanding knowledge sharing: organizational culture, informal workplace learning, performance support, and knowledge management. *Contemporary Issues in Education Research (CIER)*, 10(1), 45–52. <https://doi.org/10.19030/cier.v10i1.9879>
- Cohen, D., & Crabtree, B. (2006). Qualitative Research Guidelines Project. <http://www.qualres.org/HomeTria-3692.html>
- Dale, M., & Bell, J. (1999). *Informal learning in the workplace* (Vol. 83). London: Department for Education and Employment.
- Darke, P., Shanks, G., & Broadbent, M. (1998). Successfully completing case study research: combining rigour, relevance and pragmatism. *Information systems journal*, 8(4), 273-289.
- de Moraes, V. V., & Borges-Andrade, J. E. (2014). Informal learning and development. In K. Kraiger et al., *The wiley blackwell handbook of the psychology of training, development, and performance improvement*. (pp. 419-435).

- Farrow, R., Iniesto, F., Weller, M. & Pitt., R. (2020). The GO-GN Research Methods Handbook. Open Education Research Hub. The Open University, UK. CC-BY 4.0. http://go-gn.net/gogn_outputs/research-methods-handbook/
- García-Peñalvo, F. J., & Conde, M. Á. (2014). Using informal learning for business decision making and knowledge management. *Journal of Business Research*, 67(5), 686–691. doi: <http://dx.doi.org/10.1016/j.jbusres.2013.11.028>
- Garrick, J. (2012). What is informal learning in the workplace? In J. Garrick, *Informal learning in the workplace: Unmasking human resource development*. (pp. 1-14.) London: Routledge.
- Haas, M. R., & Hansen, M. T. (2007). Different knowledge, different benefits: Toward a productivity perspective on knowledge sharing in organizations. *Strategic management journal*, 28(11), 1133-1153.
- Holloway, I., Todres, L. (2003). The status of method: Flexibility, consistency and coherence. *Qualitative Research*, 3, 345–357. doi:10.1177/1468794103033004
- Holmes, Andrew Gary Darwin. (2020). Researcher positionality - A consideration of its influence and place in qualitative research. *Shanlax International Journal of Education*, 8(4), 1-10. doi: <https://doi.org/10.34293/>
- Johnson, R. B. & Christensen, L. (2019). Methods of Data Collection in Quantitative, Qualitative, and Mixed Research. In: Educational Research.
- Juan, S. H., Ting, I. W. K., Kweh, Q. L., & Yao, L. (2018). How does knowledge sharing affect employee engagement?. *Institutions and Economies*, 10(4).
- Kivunja, C., & Kuyini, A. (2017). Understanding and applying research paradigms in educational contexts. *International Journal of higher education*, 6(5), 26-41.
- Le Clus, M. A. (2011). Informal learning in the workplace: A review of the literature. *Australian Journal of Adult Learning*, 51(2), 355-373.

- Lemmetty, S. (2021). Employee opportunities for self-directed learning at technology organisations: features and frames of self-directed learning projects. *Studies in Continuing Education*, 43(2), 139-155.
- Li, J., & Herd, A. (2017) Shifting practices in digital workplace learning: an integrated approach to learning, knowledge management, and knowledge sharing. *Human Resource Development International*, 20(3), 185-193. DOI: 10.1080/13678868.2017.1308460
- Lincoln, Y., & Guba, E. G. (1985). *Naturalistic inquiry*. Newbury Park, CA: Sage.
- Merriam, S. B. (2002). Introduction to qualitative research. *Qualitative research in practice: Examples for discussion and analysis*, 1(1), 1-17. Retrieved from [https://stu.westga.edu/~bthibau1/MEDT%208484-%20Baylen/introduction to qualitative research/introduction to qualitative research.pdf](https://stu.westga.edu/~bthibau1/MEDT%208484-%20Baylen/introduction%20to%20qualitative%20research/introduction%20to%20qualitative%20research.pdf)
- Milligan, C., Littlejohn, A., & Margaryan, A. (2014). Workplace learning in informal networks. In *Reusing open resources*. (pp. 115-125). Routledge.
- National Forum for the Enhancement of Teaching and Learning in Higher Education (2016, August). National professional development framework for all staff who teach in higher education. Retrieved from <https://hub.teachingandlearning.ie/wp-content/uploads/2021/06/NF-2016-National-Professional-Development-Framework-for-all-Staff-Who-Teach-in-Higher-Education.pdf>
- Nowell, L. S., Norris, J. M., White, D. E., & Moules, N. J. (2017). Thematic Analysis: Striving to Meet the Trustworthiness Criteria. *International Journal of Qualitative Methods*, 16, 1-13. <https://doi.org/10.1177/1609406917733847>
- Payne, A. M., Stephenson, J. E., Morris, W. B., Tempest, H. G., Mileham, A., & Griffin, D. K. (2009). The use of an e-learning constructivist solution in workplace learning. *International Journal of Industrial Ergonomics*, 39(3), 548-553.

- Raemdonck, I., Gijbels, D., & Groen, W. (2014). The influence of job characteristics and self-directed learning orientation on workplace learning. *International Journal of Training and Development*, 18(3), 188-203. doi: 10.1111/ijtd.12028.
- Scotland, J. (2012). Exploring the Philosophical Underpinnings of Research: Relating Ontology and Epistemology to the Methodology and Methods of the Scientific, Interpretive, and Critical Research Paradigms. *English Language Teaching*, 5(9), 9-16. Retrieved from: <https://www.ccsenet.org/journal/index.php/elt/article/view/19183>
- Seemann, P., Štofková, Z., & Binasova, V. (2019, May). Coaching as a modern form of company management and development tool to increase the business competitiveness. In: *Economics, Management and Technology in Enterprises*. (pp. 93-101). Atlantis Press.
- Taylor, P.C., & Medina, M.N.D. (2013) Educational research paradigms: From positivism to multiparadigmatic. *Journal for Meaning-Centered Education*, 1. <http://www.meaningcentered.org/journal/volume-01/educational-research-paradigms-from-positivism-to-multiparadigmatic/>
- Yaakob, A. F., Abu Hassan, N. N., Hassan, F., & Abdullah, A. (2021). Virtual job shadowing (VJS): An alternative to face-to-face practical training.
- Yazan, B. (2015). Three approaches to case study methods in education: Yin, Merriam, and Stake. *The Qualitative Report*, 20(2), 134-152. Retrieved from <http://nsuworks.nova.edu/tqr/vol20/iss2/12>

Appendix 1: Plain language statement

1. Introduction to the Research Study

The working title of the study that you are invited to participate in is: Practice, Engagement and Impact of Informal Learning at the Workplace – a Case Study. It is being undertaken at the Centre for Education and Lifelong Learning at National College of Ireland by Ingrid Valko-Juhasz (x20100736@student.ncirl.ie) as part of the Educational Practice MA programme.

2. Details of the required involvement in the Research Study

The researcher will schedule a conversational interview session with you, where you can discuss the terms, aspects, motivations, the facilitating and withholding factors and the supposed impact of informal learning at the workplace. The questions will be open-ended, allowing you to elaborate on your experience about informal learning. Only one researcher will conduct the interview and it will take approximately 30-45 mins. The interview will take place online using the web-conferencing application MS Teams and it will be recorded.

3. Benefits of involvement in the Research Study

There is a strong potential that by being involved in this study you will be contributing to a revised learning strategy at the company in the future. The purpose of the study is to get a general understanding about employees' informal learning practices and its perceived impact on employees' professional development, and explore the possible motivating and facilitating factors in informal learning with the aim to use the findings of the research as a basis for a future learning strategy at the company.

4. Arrangements to be made in order to protect confidentiality of data

The data collected during this study is confidential and will be analysed only by the researcher.

Anonymity of participants will be protected to the best of my abilities. Interview recordings will be transferred to a secure cloud storage and will be identified by a number. Recordings will be destroyed after transcripts are created. Anonymised transcripts will be stored in a secure cloud storage of National College of Ireland. All collected and stored data is in compliance with GDPR regulations.

5. Advice that data is to be destroyed after a minimum period

According to NCI policy, the collected data will be securely destroyed after having them stored for five years.

6. Statement that participation in the Research Study is voluntary

Participation in the research is completely voluntary, and you have the right and opportunity to withdraw consent to participate in the study at any point.

7. Any other relevant information

All participants in the study are employed by the same company in question. The completed dissertation will be publicly available via the NCI research repository norma.ncirl.ie.

Appendix 2: Informed consent form

1. Research Study Title

The working title of the study that you are invited to participate in is: Practice, Engagement and Impact of Informal Learning at the Workplace – a Case Study. It is being undertaken at the Centre for Education and Lifelong Learning at National College of Ireland by Ingrid Valko-Juhasz (x20100736@student.ncirl.ie), supervised by Dr Yvonne Emmett (Yvonne.Emmett@ncirl.ie) as part of the MA programme of Educational Practice.

2. Purpose of the research

The purpose of the study is to get a general understanding about employees' informal learning practices and its perceived impact on employees' professional development, and explore the possible motivating and facilitating factors in informal learning with the aim to use the findings of the research as a basis for a future learning strategy at the company.

3. Confirmation of requirements (as called out in the Information sheet)

As per the 3. section of the Information Sheet, participants are invited to attend a conversational interview. The researcher will request to record the interview session.

4. Please complete the following section by ticking the boxes for each question.

I have read the Information Sheet attached.	<input type="checkbox"/>
I have understood the information provided.	<input type="checkbox"/>
I had the opportunity to ask questions about this study.	<input type="checkbox"/>
I have received satisfactory answers to all my questions.	<input type="checkbox"/>
I agree to have the interview sessions video recorded.	<input type="checkbox"/>

I agree to have anonymised quotations from the interview session being used in the study report.	
--	--

5. Voluntary Participation

Your participation in this study is voluntary. You have the right and opportunity to withdraw consent to participate in the study at any point.

6. Protecting confidentiality of data

The data collected during this study is confidential and will be analysed only by the researcher. Anonymity of participants will be protected to the best of my abilities. Interview recordings will be transferred to a secure cloud storage and will be identified by a number. Recordings will be destroyed after transcripts are created. Anonymised transcripts will be stored in a secure cloud storage of National College of Ireland. All collected and stored data is in compliance with GDPR regulations.

7. Please read and sign the section below

I have read and understood the information provided in this form. I had the opportunity to ask questions about this study. All my questions have been answered by the researcher and I have a copy of this consent form. I consent to take part in this research project.

Participant's Signature:

Name in Block Capitals:

Date:

Appendix 3: Question guide

Area 1 – Background / Professional Learning

- Can you tell me about the types of professional learning you engage in at the company?
[Explore in more detail – how, when, why, where]
- Can you tell me about your experience of remote working and the impact that it has had on your professional learning at the company?

Area 2 – Informal Learning / Unstructured Learning

- What do you understand by the term ‘informal learning’?
- Tell me about your experience of informal learning at the company? Can you give me some recent examples?
- How do you share information within your team?

Area 3 – Impact on Professional Development

- Can you tell me about the impact informal learning has had on your professional development? Can you give me some examples?

Area 4 – Supporting informal learning

- Do you think informal learning is well-supported at the company? Why? What would help?
- Do you think informal learning is recognized at the company? Why?