# Primary School Teachers' Informal Learning in The Workplace: Defining Engagement Moments and The Role of Experience

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**Abstract**

Professional development is considered essential for many professions, specifically for teachers in a rapidly changing society. An important aspect of professional development is informal learning, which is regularly used in the teaching profession. This qualitative study aims to investigate primary teachers' informal learning in the workplace and, more specifically, the deliberate part. Consequently, primary teachers from Greece were interviewed to examine the moments that impel them to participate in informal learning deliberately, their preferred informal learning activities, and the differences between novices and experienced primary school teachers regarding those engagement moments and learning activities. After analysing the data, seven engagement moments were identified, with similarities and differences between these engagement moments of novices and experienced primary school teachers and their preferred informal learning activities. These new insights could benefit teachers and school administrations in fostering the implementation of teachers' professional development and tailoring it according to their specific needs. Supplementally, this study provides a new research angle regarding primary school teachers' informal learning that could be further explored.

*Keywords*: primary school teachers' informal learning, informal learning activities, deliberate learning, engagement moments, novices and experienced teachers

**Introduction**

Nowadays, knowledge and skills can become outdated fast due to the rapidly changing society (Lohman, 2006). This primarily affects technology, medical, and ICT professions, but teachers also deal with changes, innovation, reforms, and high-pressured demands (e.g., Lohman, 2006; Van Eekelen et al., 2005). Also, the rising retirement age is essential to the current demographic and societal change and affects professional development (Kyndt et al., 2011). Specifically, there is a lack of motivation and participation in professional commitments by teachers approaching retirement (Kyndt et al., 2016). Other facts to consider regarding teachers' professional development are students' diverse backgrounds and high-rising expectations around what they are taught (Bonner et al., 2018; Cameron et al., 2013). Hence, teachers must continually develop themselves to keep up with the aforementioned situations (Cameron et al., 2013; Krasnova & Shurygin, 2020).

Professional development can occur both in formal and informal settings and can be promoted through educational programs, workshops, seminars, and professional and personal experience (Elman et al., 2005). However, Eraut (1998) argues that individuals learn mainly through informal learning, and Hoekstra et al. (2009b) support this argument by stating that learning happens through interaction and dealing with daily challenges in the workplace. Therefore, informal learning through experimenting, reflecting, and collaborating is a crucial, daily part of teachers' lives and, simultaneously, their continuous professional development (Kwakman, 2003).

Teachers' learning in formal settings has been researched significantly throughout the years, but little is known about learning without structure and facilitation (Richardson & Placier, 2001). Several studies indicate teachers' belief that they learn through their daily work (e.g., Smaller, 2005) and not as much through formal learning activities due to the insufficient knowledge transference to daily practice (Poulson & Avramidis, 2003). Although

teachers' development within their careers and its relation to their more formal learning experiences is known (Rolls & Plauborg, 2009), informal learning, specifically in this professional development process, remains ambiguous (Grosemans et al., 2015). Additionally, research on informal learning of primary school teachers is limited (Hoekstra et al., 2009a) and only focuses on the activities they undertake but not on the reasons that create this need for further learning and development, even though it is usually adopted as an important aspect of learning in the workplace (Hicks et al., 2007). The current study focuses on primary school teachers' informal learning and, more specifically, the moments when teachers deliberately seek informal learning and the way they do it as it is a crucial part of their professional development (Krasnova & Shurygin, 2020) and their preferred way of learning (Smaller, 2005). By shedding light on this matter, awareness is raised regarding the value and importance of informal learning in this profession, and relevant findings could prove valuable for primary school teachers, school administrations, and even the government to assist them with their career development.

Furthermore, findings regarding the link between informal learning and experience are indecisive within the teachers' learning research and the broader research in workplace learning (Froehlich et al., 2015). Prior research (Grosemans et al., 2015) examined differences between novice and experienced teachers' informal learning activities and found differences concerning the level of expertise and the activities they undertake. However, findings regarding the link between informal learning and experience are indecisive within the teachers' learning research and the broader research in workplace learning (Froehlich et al., 2015). Exploring the possible differences in the moments they undertake those activities in relation to their experience could support the implementation of activities and other ways to stimulate teachers' professional development. More importantly, it could provide opportunities to tailor development efforts to their specific needs and circumstances. Hence,

the differences between novice and experienced primary school teachers were examined regarding those engagement moments in informal learning and how they engage in it.

## Theoretical framework

**Teacher's multidimensional role**

The current study examines the moments that primary school teachers impel informal learning. Thus, it was essential to understand that primary school teachers' responsibilities go beyond the classroom borders, and seeking new learning experiences could be regarding different dimensions of their role. One of a primary school teacher's commonly acknowledged roles is teaching (Chaplain, 2008), but relevant literature reveals that teaching might be an important aspect, but it is not the only one (e.g., Khan et al., 2014; Ozmen et al., 2016). Besides teaching, primary school teachers should also keep ahead of changes in curriculum and its implementation, the high-rising expectations regarding students' holistic development, the rapid technological progress, and its use in the classroom (Khan et al., 2014). Additionally, teachers should take advantage of the various instructional strategies to design innovative and creative learning experiences for their students and contribute to creating new content, such as school materials, textbooks, and modules (Tengku Ariffin et al., 2018). Teachers are also dealing with planning lessons, preparing and attending meetings, and supporting students when needed (Peralta, 2005). Another aspect is the communication among school managers and teachers and teacher-parent relationships (Ozmen et al., 2016). Effective collaboration among teachers and parents has been proved beneficial for students' outcomes and development (Adams et al., 2016). Finally, teachers must educate students with special needs and students with typical development in the same classroom and implement inclusive practices (Tsakiridou & Polyzopoulou, 2014).

Hence, revealing primary school teachers' multidimensional role (Figure 1) and the different responsibilities of this profession is imperative for this study because it could hint at

the moments, and therefore the reasons, when primary school teachers seek new learning experiences to develop themselves. Additionally, it sheds light on the importance of their continuous professional development due to their complex role (Krasnova & Shurygin, 2020) that mostly happens through informal learning.

**Figure 1**

*Primary school teachers' different roles (Chaplain, 2008; Khan et al., 2014; Ozmen et al., 2016; Peralta, 2005; Tengku Ariffin et al., 2018; Tsakiridou & Polyzopoulou, 2014)*
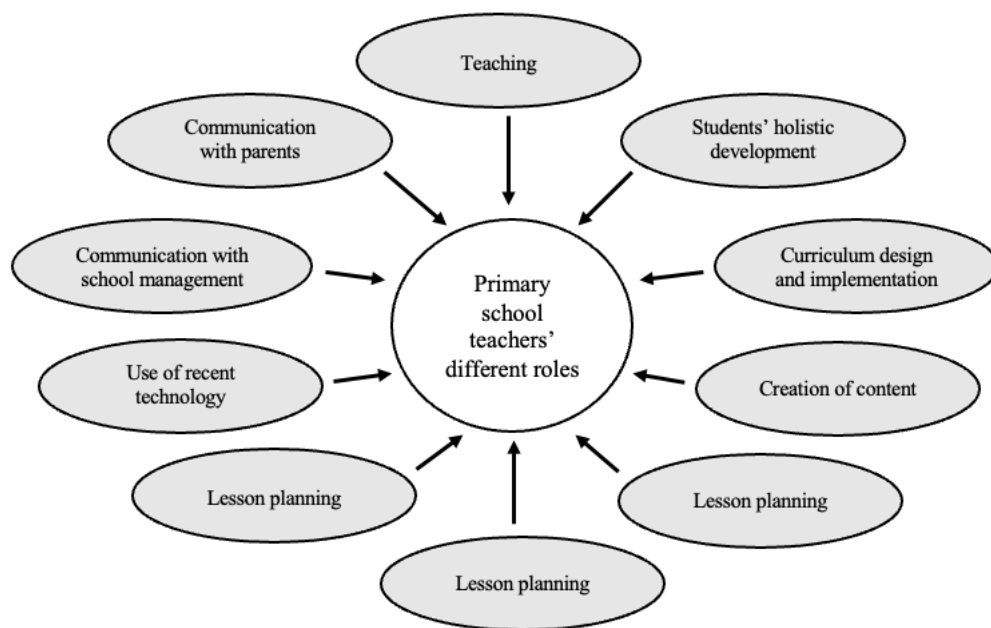


**Defining informal learning**

Studies have described formal and informal learning as opposites (Eraut, 2004), but both are essential antecedents of learning (Colley et al., 2003). As mentioned above, an important aspect of primary school teachers' professional development is learning in the workplace, which happens mostly without structure (Hicks et al., 2007). This study focused on informal learning that has been described in various ways throughout the years (e.g., Baer et al., 2008; Eraut, 2004; Hoekstra et al., 2009a). Firstly, informal learning is a way of continuous learning and learning in the workplace (Noe et al., 2013); it is flexible and

provides freedom and control to the learner regarding their learning experience and the way to achieve it (Eraut, 2004). Additionally, informal learning occurs in a broader environment than in a classroom (Eraut, 2004; Hodkinson et al., 2003; Kremer, 2005), and it occurs individually and collaboratively, through working with others, participating in group activities, and undertaking complex tasks (Eraut, 2010). Furthermore, informal learning is a way of learning deriving from the learners to develop themselves, and it is defined as a process that begins by identifying and acquiring knowledge and skills and proceeds with reflection, feedback, and experience (Baer et al., 2008; Noe et al., 2013).

Informal learning can take different forms (Berg & Chyung, 2008). First, there is unplanned learning that the learner can identify in a retrospective manner when evaluating the outcome of a meeting or an activity used during the lesson, or learning can be accidental through everyday practice when one encounters a challenging situation as dealing with a sudden disagreement between students (Hodkinson et al., 2003). According to Simpson (2006), informal learning can also be intentional and structured when individuals ask for feedback on a lesson they have prepared.

Another differentiation regarding informal learning is the individual's level of intention during an activity. Eraut (2004) described a typology of informal learning that considers the various levels of consciousness and includes three types of informal learning: implicit, reactive, and deliberative learning. Implicit learning is "the acquisition of knowledge that takes place largely independently of conscious attempts to learn and largely in the absence of explicit knowledge about what was acquired" (Reber, 1993, p. 5). Eraut (2004) compliments this definition by naming this knowledge obtained as tacit knowledge. This type of learning is instant, and some examples link memories with current experiences or building routines (Eraut, 2004). This form of unintentional informal learning is often difficult to be recognized and separated from the work because learning happens from mistakes or trial-and-

error (Tikkanen, 2002); it is integrated into daily tasks (Hodkinson et al., 2003), or it takes place through daily social interactions (Eraut, 2004). Reactive learning refers to a conscious but unplanned process happening in the middle of the action, and its knowledge is intuitive and rapid (Eraut, 2004). During reactive learning, individuals are consciously aware of the situation, but it does not include a goal or a plan (Eraut, 2004). Some examples are quick reflection, asking questions, and recognizing opportunities. Finally, deliberative learning concerns a conscious process and involves goal-oriented behaviour, requiring awareness and intention (Eraut, 2004). Specifically, this type of learning includes a learning goal and requires a definite time for gaining new knowledge and the learner's engagement in deliberative activities (Eraut, 2004). Examples of these activities are receiving feedback, asking questions, networking (Eraut, 2004), and self-directed learning and mentoring (Geddes et al., 2018).

Later, Noe et al. (2013) introduced a different typology for informal learning, including three categories: learning from others, learning from oneself, and learning from non-interpersonal sources. Learning from oneself happens through experiment and reflection, for example, reflection from mistakes; learning from non-interpersonal sources consists of reading a book or a newspaper or watching a documentary (Noe et al., 2013). Learning from others involves interaction like feedback moments, arguments, discussions, and observations (Kyndt & Baert, 2013; Noe et al., 2014). For this study, Eraut's (2004) three types of informal learning were used, especially deliberate learning, as many studies mention teachers' perspectives that they learn more and better from their daily practice and interaction with others (Smaller, 2005). Supplementally, the following definition of informal learning was formulated based on the literature review:

Informal learning is continuous learning in the workplace that can occur individually and collaboratively while providing flexibility, control, and freedom to the learner regarding their learning experience and how to achieve it.
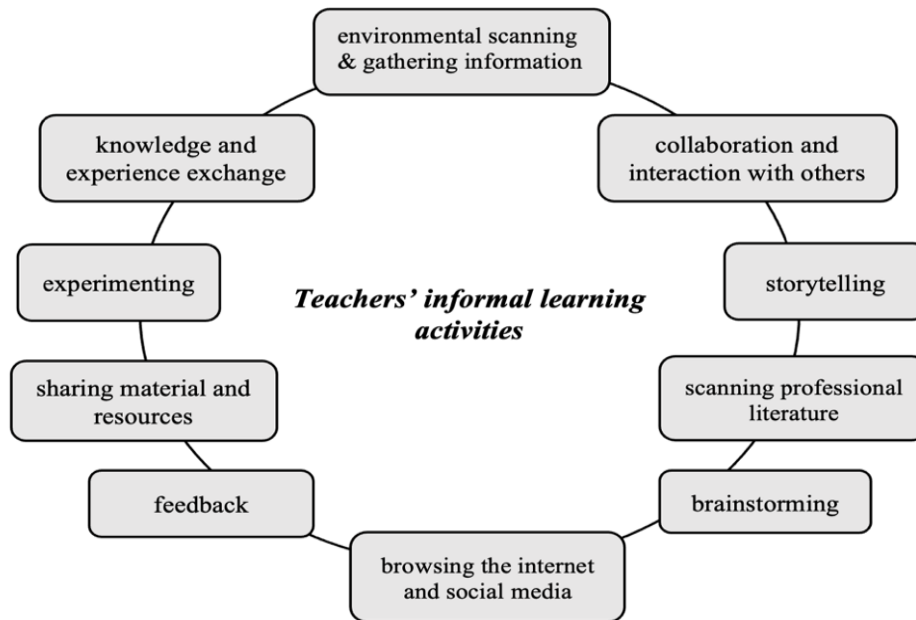
**Teachers' informal learning**

As mentioned, informal learning is crucial for career development and success, requiring employees to take personal initiatives regarding their learning (Noe et al., 2013), as it is expected to have positive outcomes on their professional knowledge and skills (Lohman, 2006). In this study, we examined what informal learning activities primary school teachers undertake in relation to their different engagement moments. It is important to illustrate what informal learning could look like in this profession as it would provide a better understanding of the moments that impels them to search for relevant new learning experiences and also foster unravelling them. As Figure 2 illustrates, previous studies have examined teachers' informal learning activities and have provided an overview of what informal learning could look like (Kyndt et al., 2016; Lohman, 2006; Lohman & Woolf, 2001).

An empirical study by Lohman and Woolf (2001) presented three categories of informal learning activities that teachers undertake related to knowledge and experience exchange, experimenting and environmental scanning, and gathering information. Later, Lohman (2006) mentioned informal learning activities in more detail, such as talking and collaborating with others, sharing material and resources, searching on the internet, scanning professional journals, observing others, trial and error, and reflection. Likewise, Kyndt et al. (2016) mentioned extra informal learning activities such as storytelling, browsing social media, getting ideas from others and brainstorming, giving and receiving feedback, co-planning, and interacting with parents and students. Teachers can undertake most of them deliberatively, as they have a significant level of consciousness, which aligns with this study's goals.

**Figure 2**

*Examples of teachers' informal learning activities (Kyndt et al., 2016; Lohman, 2006; Lohman & Woolf, 2001)*



## The role of teaching experience in informal learning

Teachers' development and, specifically, informal learning are not associated with a specific period within their career (Kyndt et al., 2016). Previous research indicates that teachers' ability to engage in learning activities depends on their teaching experience (Grosemans et al., 2015; Richter et al., 2011). Rolls and Plauborg (2009) introduced a typology of the three most impactful career stages for teachers' development. Firstly, during their first three years, teachers are referred to as "beginning teachers," and they encounter the reality of teaching dealing with a range of paradoxical feelings, from despair to fulfilment (Rolls & Plauborg, 2009). Furthermore, according to these authors, teachers must deal with students' behaviours, gain the respect of their co-workers, and become part of the school culture. Additionally, they sometimes approach colleagues aiming for informal learning, but they could be discouraged by the fear of seeming incapable (Tickle, 1994). Nevertheless, novice teachers are willing to develop themselves because they must deal with new and

different situations, they are not confident with (Flores, 2005; Rolls & Plauborg, 2009). Next, mid-career teachers aim to get promotions and gain more responsibilities because their self-confidence, drive, and aspiration reach high levels (Rolls & Plauborg, 2009). Finally, the last stage is teachers approaching retirement who feel confident about their professional abilities, resulting in a lack of motivation regarding professional development, focusing more on their relationships with their students and their achievements (Rolls & Plauborg, 2009). For this study, two groups were distinguished, novice and experienced, based on Rolls and Plauborg's typology (2009) because clear opposites provide clearer distinctions (Scheiner, 2020).

Although there is some research on novice and experienced teachers' informal learning activities, there is a controversy regarding the investment differences between the two groups (Grosemans et al., 2015). There are arguments that experienced teachers tend to avoid workplace learning due to their professional confidence (Van Daal et al., 2013). In contrast, Richter et al. (2011) found no difference in the time spent in informal learning between these groups. Research up until now has only investigated differences between the two groups only regarding their learning activities and not concerning their preferred engaged moments in informal learning, which could provide valuable information on defining possible different needs of both groups for tailoring their professional development.

**Current study**

The current study focuses on the moments when primary school teachers deliberately seek informal learning, referred to as engagement moments. This focus contributes to this field of research as it provides a new angle regarding examining teachers' informal learning, specifically in primary education. There is a gap of knowledge regarding when teachers feel the need to develop themselves, and examining this could provide valuable insights to teachers and school administrations on how to foster the implementation of their professional development that is essential (Cameron et al., 2013; Krasnova & Shurygin, 2020). Especially

because learning in the school context is the greatest place for further teachers' growth (Postholm, 2012), and informal learning is teachers' preferred way of learning (Hoekstra et al., 2009b). Furthermore, we examine what informal learning activities primary school teachers undertake concerning the different engagement moments to illustrate and better understand what informal learning looks like in this profession. Supplementarily, we examine differences between novices and experienced teachers regarding those engagement moments and their preferred informal learning activities. This could provide information on how to facilitate informal learning specifically tailored to teachers' needs and circumstances based on their level of experience in their daily work-life. Therefore, the research questions this study aims to answer are:

1. What are the defining engagement moments that impel primary school teachers to participate in informal learning deliberately?

2. Which informal learning activities do primary school teachers undertake in relation to their engagement moments?

3. What are the differences between novices and experienced primary school teachers regarding those defining engagement moments and the informal learning activities?

## Methods

### Context and sample

For this study, qualitative research has been conducted to describe and display a social phenomenon as experienced by a specific population (Ritchie, 2003). Semi-structured, online interviews were conducted with primary school teachers working in three Greek elementary school settings located in the capital of Greece, Athens. All the responders were full-time elementary school teachers responsible for a class but with different levels of experience. Additionally, all participants were female, but it was justified as female primary school teachers in Greece are mostly women. In the school year 2019-2020, 74% of the primary

school teachers were female (ΕΛΣΤΑΤ, 2019). Two interviews were conducted as a pilot, aiming to test the interview duration and assess if the questions were clearly formulated. Then a total of ten interviews were performed with primary school teachers as this amount allowed to reach data saturation. Data saturation is reached when there is enough information to replicate the study when additional insights cannot be obtained and further coding is not possible (Fusch & Ness, 2015). Table 1 provides a detailed overview of the demographic information of the participants. Based on Rolls and Plauborg's (2009) categorization, teachers with a maximum of three years of tenure were categorized as novices, and teachers with at least four years of tenure were designated as experienced. To protect participants' private data, fictive names were used.

**Table 1**

*Participants' demographic information*

| Participants | Grade of teaching | Age (yrs) | Experience (yrs) | Teacher's career stage |
|---|---|---|---|---|
| Rachel | 1 | 26 | 1 | Novice |
| Anna | 1 | 29 | 2 | Novice |
| Olivia | 2 | 28 | 3 | Novice |
| Amelia | 5 | 26 | 2 | Novice |
| Adele | 2 | 26 | 1 | Novice |
| Daniella | 6 | 56 | 31 | Experienced |
| Ellen | 2 | 31 | 7 | Experienced |
| Emma | 2 | 53 | 34 | Experienced |
| Mia | 4 | 54 | 33 | Experienced |
| Lucy | 3 | 41 | 18 | Experienced |

**Procedure**

Firstly, the research plan was approved by Utrecht University's ethics committee prior to the data collection. Participants were recruited through personal networks. At the beginning of the research, primary school teachers were contacted by phone to provide them with a brief explanation of the study goal and structure and ask them to participate. Out of fifteen teachers who were approached, ten agreed to proceed with this process. Next, they received an email with the information letter (Appendix A) and the informed consent (Appendix B), to which they agreed to by signing it and sending it back by email with the preferred interview time and date. The interviews were held online via Microsoft Teams; they took place from February 24th until April 5th and lasted approximately 45 minutes. After the interview, each participant received an email thanking them for their participation. Additionally, personal information was treated confidentially, and recordings were safely stored in an encoded folder only managed by the researcher.

**Data collection**

The interviews were semi-structured because they provide structure and reinsurance that all desirable information is gathered but simultaneously allow the interviewer more freedom (Adams, 2015). Particularly, there is the possibility of asking follow-up questions if new insights occur during the interview and support conversation flow more naturally. Additionally, the interviews incorporate the critical incident technique to ensure the in-depth examination of the research questions. This research method guides the interviewee to provide particular experiences relating to the research variable (Hughes, 2007). That way, redundant information was avoided, and meaningful data were gathered from real-life human experiences that influenced the interviewees by focusing on specific incidents. This technique was appropriate for the current study as informal learning could be described better through specific experiences and situations (Jeong et al., 2018).

**Interview guideline**

The interview guideline contained three parts: introduction, main body, and conclusion, ensuring a good flow in the conversation (Appendix C). Several considerations were taken into account to create an appropriate interview setting. Firstly, the participants were asked if they agreed to be recorded to address ethical considerations. They were reminded about voluntarily and confidentiality and were provided with a brief explanation of the aim of the study. Afterwards, the introduction of both parts followed with the gathering of the demographic information needed.

The central body of the interview consisted of questions about deliberate informal learning. Participants were asked to describe moments when they impelled informal learning related to their multidimensional role. For example, questions like "What do you consider a difficult aspect of your role as a teacher? Can you give an example of such difficulty and describe it? Why do you consider that a difficulty?" helped the interviewee to recall and describe challenging situations regarding their role that they seek a form of informal learning. For the follow-up questions and the clarifications, informal learning activities literature was used to guide the interviewees better and support them in unravelling their critical incidents. For example, relevant questions were, "Every attempt you make to learn something new is considered a learning experience. For example, storytelling, giving or receiving feedback, browsing through the internet. Can you give us a personal example that you can remember when you deliberately attempted to learn something new?". Finally, when the interview ended, the participants were asked if they had additional information they wanted to share, followed by acknowledgments for their participation.

**Table 2**

*Operationalization of interview*

| Concepts | Description | Literature support |
| --- | --- | --- |

| Informal learning | The continuous learning in the workplace occurs both individually and collaboratively while providing flexibility and freedom to the learner (e.g., working with others). | Eraut, 2004<br><br>Eraut, 2010<br><br>Noe et al., 2013 |
|---|---|---|
| Deliberate learning | The learning process which is conscious, involves goal-oriented behaviour and requires awareness and intention (receiving feedback, asking questions, storytelling, internet searches, reading books and articles). | Eraut, 2004 |
| Informal learning activities | The activities someone undertakes to engage in informal learning (e.g., storytelling, feedback). | Lohman & Woolf, 2001<br><br>Lohman, 2006<br><br>Kyndt et al., 2016 |
| Teachers' multidimensional role | Teachers' many different responsibilities in their everyday work-life (e.g., lesson planning, collaboration with parents). | Peralta, 2005<br><br>Khan et al., 2014<br><br>Tsakiridou & Polyzopoulou, 2014<br><br>Ozmen et al., 2016<br><br>Tengku Ariffin et al., 2018 |

**Data analysis**

Firstly, the interviews were transcribed and then coded in NVivo. The qualitative data gathered through the interviews were analysed using thematic analysis. This method is flexible and suitable for systematically identifying, organizing, and exploring insights and themes across a dataset (Braun & Clarke, 2012). It has also been described as the most useful

for capturing the complexities of meaning within data (Guest et al., 2012), which was needed to understand participants' experiences and how they reflect upon them in this study which is in line with the critical incident technique. Additionally, thematic analysis allows researchers to answer their research questions through the analysis, as many patterns could come up, but their relevance must be considered (Braun & Clarke, 2012). For the current data analysis, the six-phase approach of Braun and Clarke (2006) was used to guide the procedure (Figure 3). Following this approach, it was important to become acquainted with the data to answer the first research question. That was accomplished by reading all the transcripts and notes taken during the interviews, writing observations regarding emergent patterns, and proposing preliminary codes. Secondly, a coding process followed, generating labels for the data portions relevant to the research questions. After that, similar codes were grouped into themes (see Appendix D). Consequently, a thorough and careful content exploration was conducted to answer the second research question. This time the focus was on comparing patterns and themes regarding novices and experienced teachers that emerged while answering the first research question to examine differences in their engagement moments. The data analysis was an iterative and reflective process rather than a linear one (Braun & Clarke, 2006), gradually making sense of the data while remaining faithful to the transcripts and the interviewees' words and narration.

To ensure the quality of the study, quality checks were conducted. Following the quality criteria for qualitative research by Korstjens and Moser (2018), credibility was ensured by performing member checking. Member checking is a way to ensure the accurate portrayal of participant narratives by asking participants to confirm the accuracy and interpretations of data (Candela, 2019). Confirmability and dependability were ensured by conducting an audit trail. An audit trail is a qualitative strategy to establish the confirmability of a research study's findings. Confirmability involves establishing that the findings are based

on participants' responses instead of the researcher's preconceptions and biases (Carcary, 2020). The audit trail report can be found in Appendix E. Additionally, to ensure transferability, the interview questions and guide were constructed based on rich and relevant literature, ensuring that the study themes are consistent with what has been reported in other circumstances. Lastly, reflexivity was fostered by supervision meetings and peer reviews.

**Figure 3**

*Six-phase data analysis approach Braun and Clarke (2006)*

| Familiarisation with data | Generate initial codes | Search for themes | Review themes | Define and name themes | Produce report |
|---|---|---|---|---|---|

## Results

The results were formulated based on the three research questions. The first two, "what are the defining engagement moments that impel primary school teachers to participate in informal learning deliberately?" and "which informal learning activities do primary school teachers undertake in relation to their engagement moments?"*,* showed that seven categories of engagement moments impel teachers to participate in informal learning with a variety of informal learning activities either on an individual level or in collaboration with their colleagues. These categories of engagement moments with the preferred informal learning activities are presented in detail below, together with the comparison between these themes, the activities, and the two groups, novices and experienced primary school teachers. This refers to the third research question of this study, "What are the differences between novices and experienced primary school teachers regarding those defining engagement moments and the informal learning activities?".

**Dealing with challenging students**

One of the themes that emerged during the interviews as critical moments that impelled primary school teachers to seek informal learning was handling students with

special needs, behavioural issues, and inappropriate behaviour inside and outside the classroom. The fact that all ten teachers identified this theme proves its importance. For instance, Rachel described a situation with one of her students that tend to express problematic behaviours. "Two of my students thought it was funny throwing stones at parked cars during the break. When I realized this, I spoke to them, but they were unwilling to apologize so I asked my supervisor to help me". The ways of seeking informal learning in this category were mainly through collaboration with other teachers by sharing stories or similar experiences. Ellen described a difficult situation she encountered and needed help and insights from her colleagues with a student of hers with autism.

> While we were doing math, one of my students took an eraser without permission from the other student. He suddenly started shouting and ran out of the classroom alone […] I immediately asked for help, and then I was desperate for someone to advise me on how to deal with such a situation.

Additionally, they often would "get in touch with the school psychologist", and two of the teachers mentioned using the internet. Olivia mentioned another situation that required the advice of the school psychologist and her colleagues, "when children begin to discover their sexuality, you can see them grabbing their genitals […] I do not know how to approach them because we do not have adequate training in how I can discuss it with them". Regarding the comparison between the two groups, as the examples illustrate, both novice and experienced primary school teachers expressed their need for informal learning in this matter as there are many times that they have to encounter difficult situations with challenging students, and they felt they lacked knowledge on how to handle it and sought help from colleagues and school psychologists, activities based on collaboration with others.

**Creation of new content**

The next most reported engagement moment that impelled primary school teachers to seek informal learning was the creation of new content. All the interviews identified it and related to (re)design content that primary school teachers use in their classrooms, present, and share with their students. Regarding the preferred informal learning activities, teachers mentioned that they gained their new insights mainly through self-study books and articles or browsing the internet. Anna reported, "I had to search in books I had bought to find types of exercises and on the internet to enrich the report". Some of them stated that they also get inspired and gain new ideas for exercises and activities by discussing them with other teachers or sharing existing content. For example, Mia mentioned in her interview that "you also hear different ways and different sources that they have used and that will surely enrich it and make it more interesting". Concerning the comparison of the two groups, even though the creation of content was one of the most reported reasons that primary school teachers, both novices and experienced, deliberately sought informal learning, some differences between the two groups were identified regarding how they did it. Specifically, experienced teachers sought informal learning mainly through collaboration and exchanging ideas with colleagues, as illustrated in Mia's example. Only one of them reported the use of the internet. Contrarily, novice teachers reported using the internet to gain new insights and inspiration or books, especially from their studies, as illustrated in Anna's example. Despite these differences, both groups expressed the importance of enriching their content because students' needs are constantly changing, and as Lucy mentioned, "adaptation is needed".

**Ways of teaching**

Another engagement moment reported by most participants was related to different ways of instruction that they could use in their lessons. It could be related to ways of innovative teaching or understanding the right way of teaching to be meaningful and

beneficial for the students. For instance, Anna mentioned that ″we had to work on it (mathematical chapter) a lot and find ways to teach it so that it is understandable and easy". Regarding the preferred informal learning activities, interviewees reported collaboration with colleagues, asking for feedback, storytelling, and internet searches. Finally, concerning the differentiation between the two groups, even though novices and experienced teachers identified this theme, there were differences regarding the reason that they were seeking informal learning for this matter and sometimes in the way they did. Novice teachers expressed the need for guidance and support regarding the ways of instruction they could use when teaching a class. They mostly did it by asking for feedback, storytelling from experienced teachers, and rarely internet searches. Amelia mentioned that "for teaching mathematics […] she helped me because, before I entered the class, she explained how to approach it, she made me a cheat sheet and told me that I should ask the student first". Adele also reported that "she had told me about texts we read and how by asking questions you will help the children to understand your text, grammatical phenomena, syntactic phenomena. Conversations with her helped me". On the other hand, experienced teachers expressed the need for innovation in their instruction. They were seeking new knowledge mainly through collaboration with colleagues, especially novice ones who have graduated more recently and had a better understanding of new ways of instruction. Emma stated, "I want the opinion of my colleagues, especially younger ones, because we need to improve the way we teach with fresh ideas". Two of them even mention that they have weekly meetings when they brainstorm on how to improve their lessons. Specifically, Daniella reported that "when you collaborate well with a young colleague, she may propose something. A way we can pass on knowledge to students regarding mathematics or physics, for example, that she learned from a seminar or the university".

**New technologies in education**

Another engagement moment that was identified was regarding new technologies in education and, more specifically, the use of online platforms, video conferencing tool, and computers and tablets in the classroom. Furthermore, the interviewees engaged in informal learning regarding this matter through collaborative activities. For instance, by working together, exchanging ideas and insights, asking for feedback, and self-study. Lucy mentioned that:

> Due to the pandemic, there was a sudden need for adaptation and the use of new technologies. During the last years, technology has become an important part of education with everything that happened. We had to study a lot. Everything was done online, from how we send the homework to how we upload interactive exercises. We met and helped each other. We solved our questions and practiced how to do a lesson online.

Regarding the research question about comparing the two groups, this category was only identified from the interviews with experienced teachers. Almost all of them gave at least an example where they struggled with using new technologies and had to collaborate with colleagues to overcome the lack of knowledge, especially with younger ones that are more familiar with new technologies. Daniella mentioned in her interview that "a young colleague certainly has a lot of knowledge in IT subjects. You may not have them. So, you tell them I would like to do that. Can you help me? I can tell you what we need to write".

**Classroom management**

Another identified engagement moment was related to classroom management which consists of actions, strategies, and techniques that teachers use to keep students organised, focused, and productive while maintaining order during a class. The informal learning activities regarding this theme involved storytelling, observation of others, asking for

feedback, and exchanging opinions. Amelia shared an example with a colleague that advised and guided her regarding this matter by saying that "she gave me tips on how to manage situations in my classroom and when to raise my voice. When you start as a new teacher, I think you are very anxious regarding how to impose yourself on the children". Finally, concerning the differentiation between the two groups, this theme was primarily identified by novice teachers because due to their lack of experience, sometimes they needed advice regarding their classroom management from experienced ones. Olivia explained:

> The tone of voice is something you cannot learn in a seminar. You can only learn this experientially by seeing how someone else makes some remarks or brings the children back in order by eye contact or touching the shoulder.

Only one experienced teacher mentioned something relevant to classroom management but from a different perspective. Specifically, she said, "I will have another generation of children who are even further away from me. So, I want to be able to approach those kids too. I want those kids to listen to me and accept me".

## Communication with parents

Other moments related to deliberate informal learning reported by many participants were the communication with the parents. This includes how they should refer to the parents, the best way to communicate things related to their children's performance, and most importantly, how to have a difficult conversation. Primary school teachers engaged in informal learning regarding this category by collaborating with colleagues, the school administration, and the school psychologist. Adele gives an example by saying, "the communication with the principal, the deputy principal and a meeting I had with the school psychologist regarding handling a student with behavioural problems and how I can report specific incidents to the parents helped me a lot". Another informal learning activity

regarding this theme was asking for feedback and storytelling. Amelia provided an example that she said:

> It helps me a lot to learn, to have feedback on how the parents are, that is, the background of the children. How are the parents? This helps you be a little more prepared for what you will face afterwards. Or how to talk to these parents.

Regarding the comparison between the two groups, this theme was identified mainly from the interviews with novice primary school teachers as it was something they brought up quite some times during the conversation as moments when they needed help. Ellen illustrated this by stating, "it is quite stressful for me if I have a meeting with a parent where we will discuss something that may be difficult for me or if their child is difficult, and I want to say some things more serious". This was not the case for the experienced teachers. Daniella, however, did mention that it is common to advise younger and novice teachers about the communication of parents, specifically "advice regarding parents, on how to handle them. For instance, what to say to them to not to be misunderstood? Or how can I tell something".

**Time management**

The last engagement moment that was unravelled through the interviews was regarding time management. Time management refers to the prioritisation and division of tasks in a proper way. Asking for feedback and advice and interacting with others on how to handle their time and planning were the reported informal learning activities regarding this theme. Anna explained that "we can run a specific project during a week and because the other girls have the experience and flexibility to do it, I ask for more clarification in order to avoid any possible mistakes". Additionally, Amelia explained, "especially at the beginning I used to ask if, for example, ten minutes are enough to do this piece in the time dedicating to Reading". Concerning the differentiation between the two groups, this theme was identified only from interviews with novice primary school teachers as most of them described a

relevant situation, which was not the case for experienced primary school teachers. As mentioned in the literature review, a primary school teacher's role includes many different things; therefore, prioritizing their tasks and dividing their time properly is difficult. Especially for novice teachers, as they were the ones who reported it. Complimentary to that, Adele stated, "the part of the organization and prioritisation is something that can cause some stress or some further pressure. The fact that there is a schedule and a planning that needs to be followed". For novice primary school teachers to improve their time management, the focus of their informal learning activities was related to other colleagues, especially more experienced colleagues, as illustrated in the above examples.

To summarise, seven engagement moments in deliberate informal learning were revealed in this study after interviewing novice and experienced primary school teachers. The two most reported engagement moments were those related to dealing with challenging students and creating content, as all ten interviewees mentioned at least a relevant moment. The other five engagement moments were seen primarily in either one of the two groups. More specifically, novice primary school teachers identified engagement moments regarding the management of either their time, classroom, or communication with parents. Contrarily, experienced primary school teachers did not focus on moments regarding management rather than the need for innovation in teaching and using new technologies in their classrooms. Table 3 provides an overview of the seven engagement moments and the primary school teachers, novice and experienced, that identified them. In continue, both groups engaged in informal learning mainly through collaboration, exchanging ideas and opinions, storytelling, and browsing on the internet. More rarely, they were seeking informal learning through books and articles.

**Table 3**

*Primary school teachers' engagement moments*

| Primary school teachers | Dealing with challenging students | Creation of new content | Ways of teaching | New technologies in education | Classroom management | Communication with parents | Time management |
|---|---|---|---|---|---|---|---|
| Rachel | ✕ | ✕ | | | ✕ | | ✕ |
| Anna | ✕ | ✕ | ✕ | | ✕ | ✕ | |
| Olivia | ✕ | ✕ | ✕ | | ✕ | ✕ | |
| Amelia | ✕ | ✕ | ✕ | | ✕ | ✕ | ✕ |
| Adele | ✕ | ✕ | ✕ | | ✕ | ✕ | ✕ |
| Daniella | ✕ | ✕ | ✕ | ✕ | | | |
| Ellen | ✕ | ✕ | | | | ✕ | |
| Emma | ✕ | ✕ | ✕ | ✕ | | | |
| Mia | ✕ | ✕ | ✕ | ✕ | ✕ | | |
| Lucy | ✕ | ✕ | | ✕ | | | |

**Discussion**

This study aims to reveal the moments when primary school teachers deliberately engage in informal learning and the informal learning activities they undertake during these engagement moments. Additionally, possible similarities or differences between novice and experienced primary school teachers were investigated regarding the engagement moments and the informal learning activities. Due to the importance and need for professional development (Cameron et al., 2013) and since informal learning is crucial for primary school teachers' learning and development (Krasnova & Shurygin, 2020), this area of research aims to shed light on how to tailor development efforts to primary school teachers' specific needs and circumstances. After interviewing primary school teachers, several engagement moments regarding informal learning were unravelled that describe when and how they seek this type

of learning. For both novice and experienced primary school teachers, similarities and differences were identified in their engagement moments and informal learning activities.

**Findings and contribution to the literature**

This study contributes to primary school teachers' informal learning literature as it unravelled seven engagement moments regarding that matter related to different aspects of their roles and tasks. The unique approach of this study enabled us to reveal that primary school teachers, both novice and experienced, engage in informal learning because they often have to deal with challenging students and lack knowledge on how to achieve that. That is in line with previous research suggesting that teachers are also responsible for educating students with special needs and students with typical development in the same classroom and implement inclusive practices that are not necessarily related to disability but all kinds of differences between students (Tsakiridou & Polyzopoulou, 2014). Additionally, research shows that even though primary school teachers support inclusion in the classroom and school in general, they appear hesitant to implement it as they lack knowledge and expertise (Avramidis et al., 2019). That could explain their need for informal learning when dealing with such students because support is needed to balance their lack of knowledge regarding this topic. Therefore, future research on how to support teachers to learn about this subject and feel more confident is needed as it could boost their professional development. However, regarding the generalizability of this result, it is important to consider how classrooms are structured and whether teachers are confronted with a heterogeneous group regarding special needs might differ per country.

Moreover, this was the first study to show that novice and experienced teachers sought informal learning when they wanted to create or improve the classroom content. This is consistent with previous research that supports that a big part of the teacher's role is to design innovative and creative learning experiences for their students and contribute to creating new

content (Tengku Ariffin et al., 2018). Furthermore, research suggests that participating in collaborative design increases teachers' understanding of instructional techniques and improves their knowledge regarding the design of instructional materials, resulting in fostering their professional development (Velthuis, 2014). This could explain why primary school teachers engage in informal learning when creating or improving classroom content and why they usually choose to achieve that through collaboration. However, this study showed that novice teachers also use the internet and relevant literature in this process, which could be due to their familiarisation with technology (Prensky, 2001).

Furthermore, the results of this study revealed that novice teachers mostly struggle with issues related to management, such as time management, classroom management, and dealing with parents, which are important parts of their role. These are important reasons that they seek informal learning. Classroom management in regards to compliance, the discipline of the teacher's teaching choices and time allocation, and the theoretical and practical knowledge that drives these decisions together with the stream of interaction in the classroom is a common struggle of novice teachers (Wolff et al., 2014). It is also connected with the experience level; therefore, the need for novice teachers for support and guidance from experienced teachers is reasonable. Further research could examine how experienced teachers can support novices in this matter to assist each other in their professional development. On the other hand, the need for technology integration in the classroom was a topic experienced primary school teachers struggled with, especially in recent years. Nevertheless, the pandemic of Covid 19 forced the learning to be carried out using online learning, which was challenging for teachers and, precisely, for older ones that lacked relevant knowledge and skills and needed support (Lubis & Dasopang, 2021).

Finally, this study contributes to existing literature regarding teachers' informal learning activities by exploring the activities concerning the moments when they seek

informal learning. The participants reported that they sought informal learning mainly through storytelling, collaboration with others, exchanging ideas, browsing the internet, and reading relevant literature. That is in line with previous research regarding teachers' informal learning activities (Kyndt et al., 2016; Lohman, 2006; Lohman & Woolf, 2001) and supports the argument that teaching might be an important aspect of this profession, but it is not the only one (e.g., Khan et al., 2014; Ozmen et al., 2016).

**Limitations and Future research**

This research is not without limitations. The first one is related to the generalizability of this study. A few teachers were involved in this study because the primary focus was qualitative data collection. This way, rich data was collected, providing a comprehensive picture of the primary school teachers' engagement moments in informal learning, but it prevents the results from being generalisable. Additionally, the focus of the study was on greek elementary school settings. All interviewees were greek elementary school teachers working in Greece. It is important to notice that the culture and structure of the school environment might differ in other countries; therefore, this study cannot draw general conclusions. Since this study provides a new angle regarding examining teachers' informal learning, specifically in primary education, and there is a gap of knowledge regarding this matter, it would be interesting to have more extensive studies examining this topic. Studies should consider teachers from different countries and backgrounds to gain concrete results and insights and explore if cultural and structural factors can influence the results of primary school teachers' engaging moments regarding informal learning.

Furthermore, the focus of this study was deliberate informal learning and, therefore, when primary school teachers consciously engage in informal learning through various activities. However, informal learning could also be unconscious, and teachers could undertake activities they are unaware of. Further research could also examine this aspect of

informal learning and how unconscious learning experiences and learning activities could foster even more the professional development of primary school teachers. Video observations could examine this in combination with interviews or self-reports based on the video observations to examine the unconsciousness part of informal learning.

Another significant limitation of this study is related to the audit trail that was performed to ensure the confirmability of the study. Specifically, the auditee could not audit the whole data set because of a language barrier. The data analysis and the result and discussion sections were explained in English. Furthermore, the auditee was provided with English translations of the most meaningful data. However, a more thorough examination of the data could be accomplished if the auditor's language and the language of the data were common.

**Practical implications**

Acknowledging the engagement moments identified in this study and the related activities raises awareness of the value and importance of informal learning in this profession by providing valuable information on specific needs regarding their professional development. More specifically, the findings indicated that novice primary school teachers struggle with management issues and seek advice and help from more experienced teachers. School administrations and the government could use these insights to develop mentor programs that would allocate experienced teachers to novice ones to assist them through their first years in the profession regarding time management and classroom management and, therefore, their professional development. Additionally, development efforts regarding technology integration could boost the professional development of experienced teachers that reported related struggles and need for help. `That could be accomplished through weekly or monthly meetings with teachers familiar with technology who could share their knowledge and experience.

Another valuable finding of this study was that primary school teachers undertake activities involving interaction. Therefore, their informal learning should be facilitated by giving them enough opportunities to interact with peers, collaborate, have brainstorming sessions, try out new materials, and create space for knowledge and expertise sharing. School administration or primary school teachers themselves can arrange sessions throughout the school year for this purpose.

**Conclusion**

Nowadays, continuous professional development is important as skills and knowledge can become obsolete because of the rapidly changing society. Primary school teachers are also affected, and the need for professional development has emerged (Lohman, 2006). Within this profession, informal learning is fundamental (Krasnova & Shurygin, 2020) and the preferred way of learning (Smaller, 2005). This study was the first approach to explore when they feel the need to seek informal learning, what activities they undertake in such moments, and explore possible differences based on their experience level. That way, insights on how to support primary school teachers' professional development were discovered that could be useful for primary school teachers, school administrations, the government, and anyone responsible for the design and implementation of such initiatives and an interesting line of research was proposed.

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*Primary School Teachers' Informal Learning in The Workplace: Defining Engagement Moments and The Role of Experience*

February, 2022

Utrecht, Netherlands

Dear Sir/Madam,

By means of this letter, we would like to invite you to participate in the research project "Primary School Teachers' Informal Learning in The Workplace: Defining Engagement Moments and The Role of Experience".

## About the study

This study is a qualitative study that focuses on primary school teachers' informal learning, specifically the moments when teachers deliberately seek informal learning, referred to as engagement moments. Supplementarily, we will examine differences between novices and experienced teachers regarding those engagement moments. The data will be gathered by means of interviews from primary school teachers both from public and private schools. Moreover, the data analysis consists of transcribing, coding, and reporting the results.

## What is expected of you as a participant

Participating in this study means that you offer to spend approximately 40 minutes answering some questions in an online interview, via Teams. The interview is a one-time event, and you do not need to take further action. Lastly, the interview guidelines are designed by the

researcher and approved by the supervisor from the Utrecht University and the Ethics Review Board of the Faculty of Social & Behavioural Sciences.

## **Confidentiality of data processing**

This study requires us to collect some of your personal data. We need this data in order to be able to answer the research question properly or to be able to contact you for follow-up research. This personal data will be stored on a different computer than the research data itself (the so-called raw data). The computer on which your personal details are stored is secured to the highest standards, and only researchers involved will have access to this data. The data itself will also be protected by a security code. Your data will be stored for at least 10 years. This is in accordance with the guidelines provided by the VSNU Association of Universities in the Netherlands. Please refer to the website of the Authority for Personal Data: https://autoriteitpersoonsgegevens.nl/nl/onderwerpen/avg-europese-privacywetgeving, for more information about privacy.

## **Voluntary participation**

Participation in this study is voluntary. You can end your participation in the study at any time, without any explanation and without any negative consequences. If you end your participation, we will use the data collected up to that point, unless you explicitly inform us otherwise.

## **Independent contact and complaints officer**

**Contact details of the researcher**

Name: Maria Agrafioti

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**Contact details of the supervisor**

Name: Marijn Wijga

Email address: m.wijga@uu.nl


**Contact for formal complaints**

Email address: klachtenfunctionaris-fetcsocwet@uu.nl


If, after reading this information letter, you decide to take part in the research, I would kindly ask you to sign the attached reply slip and send it back.



With kind regards,

Maria Agrafioti

**Appendix B**

*Informal consent*

*Primary School Teachers' Informal Learning in The Workplace: Defining Engagement Moments and The Role of Experience*

**<u>Consent statement</u>**

I hereby declare that I have read the information letter about the "Primary School Teachers' Informal Learning in The Workplace: Defining Engagement Moments and The Role of Experience" study and agree to voluntarily participate in the study.

I understand that this research study has been reviewed and approved by the Faculty Ethics Review Board (FERB) for Studies Involving Human Subjects: Behavioural Sciences Committee at the Utrecht University. For research problems or questions regarding subjects, the Institutional Review Board may be contacted through the following email, klachtenfunctionarisfetcsocwet@uu.nl.

Name (do not include any further identifying information)

_____

Date

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**Appendix C**

*Instrument – Interview Questions*

**Introduction**

First of all, I would like to thank you in advance for taking the time to participate in the current study. My name is Maria Agrafioti, and I am a Master's student of Educational Sciences at Utrecht University. The goal of this master thesis is to identify engagement moments that impel primary school teachers to participate in informal learning deliberately and examine possible differences between novices and experienced teachers regarding this matter. The interview will last about 30-40 minutes, and I want to ask permission to record our conversation. The recording will be used so that no important information is lost. Everything that is discussed during the conversation is confidential and will be mentioned anonymously in the thesis. After the completion of the thesis, all data will be erased. You are free to stop the interview at any time without giving a reason. Do you have any questions before we start?

**Main body**

| Research question | Questions | Criteria |
|---|---|---|
| Intro: Demographic information | 1. Can you state your name?<br>2. Can you state your gender?<br>3. Can you state your age?<br>4. Can you state the grade you teach?<br>5. Can you state how many years of experience you have? | - |

**Clarification before the main questions regarding informal learning**

Research shows that many learning moments take place during work and especially in the teacher's profession. I can imagine that you also learn a lot at work and together with your coworkers. I mainly want to focus on informal learning opportunities, which means that I do not want to expand on learning opportunities that are formally organized, such as training courses or seminars. Therefore, we will focus on learning experiences you have encountered during your daily work. In other words, we'd like to talk about how you and your coworkers learned from each other and also how you gained new knowledge regarding your work.

| | | |
|---|---|---|
| | 6. Can you give a brief overview of your responsibilities as a primary school teacher?<br><br>→ For example, studies have shown that -just- teaching a class is a small aspect of a teacher's role.<br><br>→ Apart from teaching, what are your other responsibilities as a full-time teacher? | Teachers' multidimensional role |
| What are the defining engagement moments that impel primary school teachers to participate | 7. Can you walk me through a typical day of being an elementary school teacher?<br><br>→ Which factors can make your day difficult (related to work)? | Teachers' multidimensional role |
| | 8. What do you consider a difficult aspect of your role as a teacher?<br><br>→ Can you give an example of such difficulty and describe it? | Teachers' multidimensional role |

| in informal learning deliberately? | 9. As mentioned before, we are interested in your learning in the workplace. Every attempt you make to learn something new is considered a learning experience. For example, storytelling, giving or receiving feedback, browsing through the internet. <br> Can you give us a personal example that you can remember when you deliberately attempt to learn something new? | Informal learning <br><br> Deliberate learning <br><br> Informal learning activities |
|---|---|---|
| | 10. Can you name your preferred learning activities regarding workplace learning? <br> → Why do you choose those kinds of activities? | Informal learning <br><br> Informal learning activities |
| | 11. Can you think of a moment in the past period when you deliberately sought to learn something new in your workplace? <br> → Could you give an example and describe the situation? <br> → What was the reason that impel you to do that? | Deliberate learning <br><br> Informal learning |
| | 12. As mentioned before, teachers have many and different responsibilities. | Teachers' multidimensional role |

| | For what aspect of your job do you find yourself seeking help and new knowledge the most?<br><br>→ Can you give an example and describe the situation?<br><br>→ Do you have more examples? | Deliberate learning<br><br>Informal learning |
|---|---|---|
| | 13. Can you name the first three reasons (regarding your role) that come to your mind and impel you to seek a new learning experience?<br><br>→ Can you give an example for each one of these? | Teachers' multidimensional role<br><br>Deliberate learning<br><br>Informal learning |

**Closing**

I would like to thank you once again for your contribution and time. Are there things you want to add that you feel are important? Do you have any questions? If you are interested in the results of the research, you can contact me so I can send you my thesis.

**Appendix D**

*Codebook*

| *Themes* | *Description* | *Example* |
|---|---|---|
| Dealing with challenging students | This category entails the description of situations related to handling and dealing with students with special needs, behavioral issues and inappropriate behaviour inside and outside the classroom. | *The child is on the spectrum, he is not very functional. I could tell you that the communication with the principal and the deputy principal helped me a lot and a meeting that I had with the school psychologist regarding the handling of the student and with the person in charge of the second grade. After these discussions I had, I think that my reasoning and the way I approached the student changed a bit.* |
| Creation of new content | This category entails all actions that have the purpose of (re)design and (re)create new content that can be used inside and outside the classroom by teachers and students. | *We collaborate on the materials we are using to teach. Someone tells you; I have found a video for this math chapter. You watch this video too, or you might say: I have made a very nice presentation that has to do with Central Greece, I could share. The other can also make adjustments.* |
| Ways of teaching | This category entails all actions that have the purpose of learning or improving the way of | *We were talking about going over number ten, which last year the children in online education had already done,* |

| | teaching/instruction. It can be related to ways of innovative teaching, or understanding the right way of teaching in order to be meaningful and beneficial for the students. | *but we did not have much material at that stage. So we had to work on it a lot and find ways to teach it so that it is understandable and easy.* |
|---|---|---|
| New technologies in education | This category entails all actions that have the purpose of learning or improving the way teachers can use technology in their classroom (face-to-face or virtual). The category also entails ways that teachers can make their lesson more interactive. | *A young colleague certainly has a lot of knowledge in IT subjects. You may not have them. So, you tell them I would like to do that. Can you help me? I can tell you what we need to write.* |
| Classroom management | This category entails all actions that have the purpose of managing a classroom by means of discipline, rules, body language, tone of voice and gaining students respect. | *I need support on how to manage let's say a fight between two kids during class. I ask a lot of opinions; I am interested in others opinion. Even when I get home, I can ask my mom (also teacher) for help. And I'll definitely talk to my colleagues, the other two. How do you manage it?* |
| Communication with parents | This category entails all actions that are related with the communication with parents. Specifically, the way you approach and speak to parents, the way you present them good and bad news | *I ask older colleagues. Because they already know the school, they know the job and they do it for many years, yes, I will definitely consult them. If, for example, a student is injured, I will ask* |

| | | |
|---|---|---|
| | and the limits that should be drawn in this relationship. | *their advice. Now what do I do, should I call the mom? What should I say?* |
| Time management | This category entails all actions that have the purpose of managing the time you have in a school day. More specifically it is related to prioritizing, spend specific time in each course and teachers' ability of planning their lesson. | *It bothered me and I often asked for help and guidance at the beginning on how to divide my time to be able to finish all the lessons, so that the planning would be successful.* |

**Appendix E**

*Audit trail report*

| Audit-trail components | | Quality | | |
| --- | --- | --- | --- | --- |
| | | Visibility | Comprehensibility | Acceptability |
| Data gathering | Planned | Decisions are explicated and communicated. | Decisions are substantiated. However, in the method section it was stated that two interviews were conducted as a pilot and then a total of ten interviews were performed. However, only ten agreed to proceed with the process. Did you do the pilot with two teachers who also fall within the 'ten teachers'? Later you say that an external teacher provided feedback, maybe you can mention this earlier? | Decisions are substantiated by the researcher according to the standards, norms and values in the field of educational sciences.<br><br>The study is approved by the Ethics Review Board of the Faculty of Social & Behavioural Sciences. However, this is only mentioned in the appendix and not in the text. |

| | | | | And in addition, the participants are identifiable within their school, because you know their grade of teaching, age and experience. Did the participants know this in advance? |
| | | | | The interviews lasted approximately 45 minutes. What was the minimum and maximum time? |
| Data analysis | Planned | The auditee makes linkages that are visible. | Decisions are substantiated. | Research decisions follow the argumentative logic of the field. |

The quality of this study was sufficient.

**Appendix F**

*Master Thesis Timetable*

| Dates | Activities |
| --- | --- |
| *end of October – end of November* | Literature review |
| *mid November – start of December* | Research design |
| *start of December – start of January* | Writing the draft version of the research proposal |
| *end of January – start of February* | Finalize the research proposal (completion of Introduction, Theoretical Framework, Method, Instrument) |
| *start of February – mid of February* | Testing of instrument (for clarity and changes) |
| *mid of January – mid of February* | Finding participants |
| *mid of February – mid of March* | Conducting the interviews |
| *start of March – mid of April* | Transcribing, coding and analyzing the data from the interviews |
| *mid of April – end of April* | Writing the Results |
| *Start of May – mid of May* | Writing the Discussion and finalizing the Results |
| *Mid of May* | Upload the draft version of the thesis |
| *Mid of May – end of May* | Preparation of thesis presentation for the conference |
| *End of May – mid of June* | Finalization of the thesis according to feedback, completion of final alterations and adjustments in the conference presentation |
| *10 of June* | Upload Master Thesis (final) |
| *15 of June* | Master Thesis Presentation in Conference |

**Appendix G**

*Assignment 4*

This research plan is not without limitations. The following section will present and discuss concerns that should be taken into account. The first aspect we should take into consideration is the sample characteristics. For the current study, primary school teachers from Greece will be interviewed. In order for the teachers to feel more comfortable and be more spontaneous with their answers, the interviews will be conducted in Greek. Hence, the instrument (interview questions) and the transcriptions of the interviews must be then translated to the English language. To ensure that the translation is accurate, an English teacher will examine it and approve it.

Additionally, prior to the interviews, the participants will be asked for their consent in order to record the interviews and use these audios for the data analysis. If needed, a written consent form will be sent to the participants prior to their interview according to UU-SER protocols.

Another aspect to consider when conducting research is the effort required from participants and how this weigh against the relevance of the study. In the current situation, participants will participate in the research voluntarily without any kind of coercion or pressure from their work environment. The interviews will take place in a pre-decided time and date during teachers' personal time, not during working hours. That way, we can ensure that the time and effort of the participants will not act as a barrier in the research as it is a personal choice from the side of the interviewees.

In regards to data handling and storage, UU-SER guidelines will again be taken into consideration. After the transcription of each interview, anonymizing will follow. This means that data will be stripped of all information that can be traced back to the participant. The personal data of each interviewee do not add any value to the results, and therefore they are

entirely unnecessary and will be excluded from the written report. Also, concerning the audio files of the interviews and the transcriptions, they will be stored safely in the private computer of the researcher until the completion of the thesis project, and they will not be stored in another device or be collected by another person. All data will be erased from the device and "the trash" folder by the end of the research.

Last but not least, it is essential to mention that the current research will examine an aspect of teachers' informal learning that, to my acknowledge, is not previously studied. The results that will follow will provide some first insights regarding this matter, but the sample of the study is not big or diverse enough to draw significant conclusions and attempt generalization. More specifically, the sample of the study will be from a single country that follows a specific educational system and guidelines, and therefore the results may not apply or be irrelevant to other countries. Either way, the current study could be the beginning of researching this aspect of teachers' career development and be the motive for future studies.