



Research paper

“Just because it’s fun, it’s not without purpose”: Exploring the blurred lines of physically active learning

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ABSTRACT

While physically active learning has been positioned as a research field that deals with physical activity and learning, little attention has been given to pedagogy. This study aimed to explore teachers as constitutive of the teaching-learning process and conceptualise pedagogical aspects of physically active learning by understanding its enactment in a pedagogical practice. Findings indicate blurred lines between the underpinning pedagogies of physically active learning and other teaching methods. We discuss pedagogical aspects that constitute physically active learning in terms of integrating movement into educational activities to support pupils' subjective growth through the process of learning.

1. Introduction

In broad terms, education is an intentional and interactive process in which young people are encultured into society's competencies and social networks (Uljen, 1997, p. 3). At the same time, education and its purposes are changing, in part due to the influence of global organisations such as the Organisation for Economic Co-operation and Development (OECD) (Hovdenak & Stray, 2014) and the World Health Organisation (WHO) (Karlsen et al., 2022). In this regard, policymakers have expanded the purposes of education beyond academic and social goals to include, among others, public health goals. Although contested, this latter point has provided a platform for researchers to test initiatives promoting physical activity (PA) during the school day. These include, for example, school-based PA initiatives that focus on active breaks, active homework, and integrating PA into educational activities (Mavilidi et al., 2018; Watson et al., 2017). Initiatives that fall under the latter can collectively be characterised as physically active learning (PAL). PAL is commonly defined as “the integration of movement into the delivery of academic content” (Daly-Smith et al., 2021, p. 2). Although teachers' perspectives and experiences of PAL are receiving

increasing attention (Chalkley et al., 2022; Schmidt et al., 2022), little research has explored the pedagogical aspects of enacting PAL in teaching. In particular, little attention has been given to understanding the enactment of PAL, wherein teachers are not elements of but rather constitutive of the teaching-learning process (Uljen, 1997). Such an approach broadens the scope of interest in PAL to include teachers' values about PAL in the process of education.

To contribute to the growing body of educational research regarding teachers' perspectives on and experiences of PAL, a research project was initiated in the autumn of 2021 to generate knowledge of PAL as a teaching method in theoretical subjects. Inspired by educational ethnography, the study's primary aim was to conceptualise pedagogical aspects of PAL by understanding its enactment in pedagogical practice. As such, this study aims to explore empirically pedagogical practices by focusing on teachers' choices and judgements about PAL that are a part of, or a result of, planning, organising, and evaluating teaching. As a corollary to the empirical work, we draw on and discuss relevant theoretical perspectives to support conceptualising pedagogical aspects of PAL, to which we now turn.

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2. Revisiting pedagogy in physically active learning

PA and pedagogy are commonly combined in physical education (PE), often aimed at developing physical literacy and competence (Tinning, 2013). Although PE and PAL might, on the surface, share similar characteristics in terms of providing opportunities for pupils to be physically active during the school day, researchers argue that there are clear differences between the two. For instance, PAL is distinct because it does not have curriculum goals and is scheduled in the teaching of theoretical subjects (Watson et al., 2017). While the development of PAL has emerged from the field of public health, it has been driven by policymakers and researchers in several countries, including Norway, at regional and national levels to train teachers to increase PA levels while addressing curriculum goals (Bartholomew & Jowers, 2011; Lerum et al., 2019; Vazou et al., 2020). To integrate PAL into schools as part of everyday practice, researchers have made various attempts to adapt PAL to subject curriculum goals. However, research indicates that integration has been challenging because of a perceived lack of relevance and clarity regarding PAL in teaching among teachers (Knudsen et al., 2021; Schmidt et al., 2022). This lack of relevance might reflect an assumption within the research field that teachers should deliver pre-designed and specific PAL activities rather than allowing them the freedom to enact PAL as they plan, organise and evaluate teaching. Therefore, the departure point for this study is that PAL cannot be understood as an externally defined strategy for realising predefined learning- and health-related goals but rather as one potential teaching method that can serve different purposes of education (Mandelid et al., 2022). In this vein, we argue that integrating movement into learning underpins all forms of PAL with pedagogical considerations. To contribute to the growing body of educational research on PAL and to explore the pedagogical aspects of PAL in this study, we start by illuminating a transatlantic perspective of Anglo-American and Continental-European pedagogy as they comprise different cultural trajectories of development with particular ways of theorising and conceptualising pedagogy (Biesta, 2020a).

The Anglo-American pedagogical perspective is often referred to as educational theory because it is viewed as a multidisciplinary field of educational processes and practices (Biesta, 2020a). That is to say, Anglo-American pedagogy does not constitute a distinct discipline because it does not generate a unique form for understanding education beyond 'the validity of the knowledge contributed' in disciplines such as philosophy, history, psychology, and sociology (Hirst, 1966, p. 50). In the PAL research field, a large body of knowledge has until now focussed on pupils' learning and knowledge retention related to specific learning outcomes. For instance, research indicates the benefits of PA in terms of pupils' cognitive performance, academic skills, and increased time-on-task behaviour (Donnelly et al., 2016; Mavilidi et al., 2018; Norris et al., 2018; Shapiro & Stolz, 2019). Our review of the research field indicates that Anglo-American pedagogy has dominated PAL research with a focus on cognition, behaviour, and learning that can be traced back to the discipline of educational psychology (Daly-Smith et al., 2021; Norris et al., 2019). The use of Anglo-American pedagogy in the field of PAL is in line with the prevailing argument that pedagogy should be based on or informed by evidence (Biesta, 2010).

The Continental European perspective differs from the Anglo-American because it does not start from other disciplines but is a distinct field in its own right (Biesta, 2011). Furthermore, Continental European pedagogy is often utilised in German pedagogy and understood as a theological and value-laden process that defines goals, intentions and processes in education (Biesta, 2011). Although teachers' perspectives are receiving increasing attention in research on PAL, the conceptual framing is commonly related to educational psychology (e.g., Knudsen et al., 2021; Quarmby et al., 2019). The implication of adopting such an Anglo-American pedagogical perspective is that PAL is framed with sets of rules that specify teachers' actions and are justified as necessary for successfully implementing PAL. Continental European

pedagogy, on the other hand, does not deal with the rightness or wrongness of pedagogy but rather emphasises what is purposeful in education (Biesta, 2011). Thus, the Continental European pedagogy offers a perspective that opens up new ways of conceptualising PAL in education.

By illuminating these two pedagogical perspectives, we aim not to present pedagogy in dichotomous terms but rather to give insight into how they might contribute to further understanding the enactment of PAL. By itself, the Anglo-American emphasis on pupils' learning may obscure the broader purposes of education and reduce PAL to predefined activities that can be implemented into teaching (Mandelid et al., 2022). Exploring the pedagogical aspects of PAL is timely as it is being adopted by several education systems globally (Chalkley et al., 2022). In this way, Anglo-American and Continental European pedagogy offers different ways of understanding the opportunities PAL presents in education. For this study, we utilise a Continental European pedagogical perspective because it allows for conceptualising pedagogical aspects of PAL that draw on teachers' articulation of desirable educational goals, intentions and processes (Biesta, 2020a). According to this view, we locate and explore PAL in different practices influenced by teachers' subjectivities and school and country contexts. Such a perspective builds on the premise that teachers' pedagogical practices are not simply an element of but are constitutive of pedagogy and intentional activities (Uljens, 1997).

3. Methodology

3.1. Design

An educational ethnographic-inspired data generation process was chosen to explore the enactment of PAL in this study (Beach, 2010; Hammersley & Atkinson, 2019). To generate data, observations, audio recordings, and field talks were chosen to capture the first-hand experiences and the latent conditions about how PAL was constituted and maintained through ongoing pedagogical practices in education (Beach, 2010; Delamont & Atkinson, 2018; Hammersley & Atkinson, 2019). A combination of the data generation approaches was chosen to capture and synthesise the breadth and depth of the purpose, conditions and context of the enactment of PAL (Delamont & Atkinson, 2018).

3.2. Research context, participants and data generation process

The research context for this study was located in the Norwegian school system. In line with the tenets of educational ethnography, recruiting a relevant school and teachers was central because of its impact on the research opportunities for the study (Hammersley & Atkinson, 2019; LeCompte & Goetz, 1982). One primary school was, therefore, strategically recruited to participate because PAL was, at least to some extent, integrated into the school's culture (Hammersley & Atkinson, 2019). The school had previously participated in a municipality-initiated PAL program in the 2017/18 school year. In addition, eight teachers participated in a PAL continuing professional development (CPD) program the following year. The voluntary CPD program gave 15 European Credit Transfer and Accumulation System (ECTS) points. The school continued with PAL, thereby providing a research context where PAL, to a certain extent, was constituted and maintained through the school's culture and teacher identities (Beach, 2010; Beach et al., 2004; Hammersley & Atkinson, 2019).

The school had 20 teachers, 11 assistants, and 190 pupils and was located in a semi-urban area on the southeastern coast of Norway. Due to its surrounding topography, the school had a rich outdoor and indoor environment. The outdoor environment included a football field, a multi-sport court, an asphalt area and a nature area with forests and hills. The classrooms were open-plan with movable furniture that could be adapted to activities. The school comprised one building, facilitating short distances between classrooms, shared rooms, and outdoor areas.

The first author conducted five consecutive weeks of fieldwork at the school during the spring of 2022. Before the fieldwork, the first author and the extended research group had two digital and two physical meetings with most teachers at the school. These meetings were central to establishing a field relationship by getting to know each other (Hammersley & Atkinson, 2019). During the initial stages of the fieldwork, the first author familiarised himself with the teachers and school surroundings by participating in recesses, meetings and sharing offices with some teachers. This meant becoming a familiar sight to teachers and pupils. Although most teachers at the school contributed to the generation of data through talks in the staff room, by the copy machine, and elsewhere, a key point for all ethnographic explorations is the trade-off between the amount of time in the field and the opportunity to explore the breadth and depth of the context (Harper, 2018). This study focussed on depth by selecting one teacher as a setting for exploring the enactment of PAL (Beach et al., 2004; Jeffrey & Troman, 2004).

The focal teacher for this study was given the pseudonym Christian. He was chosen because of his extensive experience with PAL and his background as a teacher. Christian had previously participated in a PAL program initiated by the Norwegian Municipality Department for Health in the 2017/18 school year (Schmidt et al., 2022). The program sought to improve primary and secondary school pupils learning, well-being and health. In addition, he completed a PAL CPD program in 2019, rewarding him with 15 ECTS. The program consisted of seven modules that encouraged teachers to construct PAL activities that suited their pedagogical practice (Teslo et al., 2023). In addition to Christian's experience with PAL, he was qualified and taught Norwegian, English, Science, Maths, and PE. During his 26-year teaching career, he worked at two primary schools. He had worked at the project school for the last 12 years. During the fieldwork, he taught a sixth-grade class with five girls and 11 boys. All pupils were between 10 and 11 years old.

Fieldwork was conducted in teaching locations. For instance, observations were carried out in classrooms, corridors, and outside areas. This meant observing teaching regardless of the teaching method, with and without PAL. Observations were carried out with an analytical distance to the teacher and a participatory role in teaching (Beach, 2010). While the analytical distance allowed Christian's choices, language, and the teaching context to be explored, the participatory role involved walking around and asking pupils questions. Authors such as Lave and Wenger (1991) and Atkinson (2014) have pointed out that distanced and participatory observations provide opportunities to explore social and pedagogical processes in teaching, which was the purpose of this study.

Field notes were used during all teaching to capture observations. The field notes were written to distinguish between capturing situations as closely to the circumstances as possible in one column and writing analytical comments in another (Hammersley & Atkinson, 2019). Furthermore, the first author discussed emerging or unclear matters with Christian during or after teaching. These so-called field talks were in-depth interviews that could range from unstructured to structured, depending on the function of the discussion (Hammersley & Atkinson, 2019). Field talks were used to discuss the aims, process and intentions of teaching and were captured by field notes or audio-recorded. Audio recordings were also used during teaching to record the teacher and pupils' verbal communication. The data sources allowed for reconstructing vibrant circumstances and enabled capturing commonalities and discrepancies in Christian's descriptions of lived everyday practice (Beach, 2010; Beach et al., 2004; Delamont & Atkinson, 2018). Audio recordings were transcribed verbatim into Microsoft Word. The empirical material was compiled into detailed descriptions of what, how and in what order actions and conversations had transpired before being analysed and interpreted. Data were eventually imported into NVivo 12 and analysed.

3.3. Analysis

Consistent with ethnographic research, the analytical process did not have one distinct stage, as it started before the fieldwork and became progressively more focused and structured during it (Hammersley & Atkinson, 2019). Initially, this meant that field notes were used to identify anticipated and unanticipated patterns of PAL. However, the process had a funnel structure, meaning notes were progressively focused on Christian's pedagogical practice during the fieldwork. This structure allowed selection and interpretation to be gradually interwoven with more specific and in-depth analytical categories (Hammersley & Atkinson, 2019).

Since ethnographic analysis involves developing categories from a large body of data (Hammersley & Atkinson, 2019), the first author discussed all stages with the second and last authors. Initially, the categories were relatively tangible and revolved around Christian's actions and the circumstances in teaching. These categories described the activities, equipment, and environments where PAL was enacted. Detailed and repeated interaction with the data sources was central to refining analytical categories about the enactment of PAL (Hammersley & Atkinson, 2019). The analytical process led to constructing categories about the social and pedagogical orientations in teaching, including Christian's choices and judgments underlying his interactions and communication with the pupils. These categories included descriptions of when, how and why Christian enacted PAL.

As ethnographic analysis is often concerned with producing theory, the final stage included moving back and forth between categories and interacting with theoretical perspectives to develop new insights into our empiricism (Beach, 2011; Beach et al., 2004; Trondman, 2008). Since this study aimed to conceptualise pedagogical aspects of PAL, the interaction led us back to Continental European pedagogy to illuminate and make conceptual sense of the enactment of PAL (Beach, 2011; Beach et al., 2004). The analysis was finally written into two empirically-led themes (Hammersley & Atkinson, 2019; Jeffrey, 2018).

3.4. Ethical approval

The study was registered with the Norwegian Centre for Research Data. Written consent was obtained from all participants prior to data collection. Parents consented on behalf of children under the legal age. Participants were informed that participation was voluntary, that they were free to withdraw from the study at any time, and that their names and the school's name would be anonymised. All data were treated confidentially.

4. Findings

In analysing Christian's pedagogical practice, we constructed two themes on the enactment of PAL. The themes were carefully written to reconstruct vibrant descriptions of the empirical data (Jeffery, 2018; Hammersley and Atkinson, 2019; Jeffrey, 2018). Each theme depicts an illustrative quotation that captures a dimension in Christian's enactment of PAL and outlines relevant pedagogical aspects.

4.1. "Giving the pupils something they did not know they needed"

This theme was developed to capture Christian's pedagogical choices about when he enacted PAL in teaching. The enactment of PAL was conditioned by the broader planning and organising of teaching and the subject content. As a result, PAL was often enacted in teaching when Christian envisaged "(...) giving pupils something that they need, but do not always understand they need(ed)". This quotation was chosen to exemplify that PAL was chosen and enacted when it was judged beneficial for pupils to explore or experience the content of a particular lesson.

To contextualise and provide a concrete example of this theme,

Christian taught a 120-min mathematics lesson with 6th grade pupils in which he introduced reading as the subject content. During field talks, Christian said he was concerned with pupils' reading in mathematics because of the importance of understanding mathematical texts and the relevance for national tests. He explained that "some pupils get stressed out or do not pay attention to the details, they do not seem to understand the importance of reading thoroughly, and then they often get the answer wrong". This concern was prominent when introducing the lesson, as he would write the aim and topic on a whiteboard and discuss it with the pupils. In this case, Christian reminded the pupils about the importance of understanding the texts in mathematical tasks, emphasising their relevance to national tests.

The classroom had one desk with one chair for each pupil. Most of them sat together in pairs. When Christian introduced the content for his class, some pupils seemed unsure about the topic as some stared into the air while others started talking to each other. By the end of the introduction, Christian presented the first activity, an individual assignment: "You are to do five reading tasks individually". The pupils solved tasks at their desks during the assigned time and assessed tasks in a plenum afterwards. Based on observations, teaching by individual reading tasks where pupils sat at their desks seemed common to Christian's practice.

Christian walked around assisting pupils who asked for help by raising their hands. Meanwhile, some pupils' started talking. Based on observations and audio recordings, some pupils had finished their assignments while others had not. Although Christian sought to summarise the tasks and include the pupils by asking questions in the plenum, observations indicated that while some pupils raised their hands to answer questions, others were hesitant, and some avoided answering. In field talks, Christian said that he was aware that this way of summarising the tasks, to some extent, divided the class into those who answered and those who did not.

In the second half of the lesson, Christian asked the pupils to meet him outside by the football field. Christian gathered the class in a line and explained the subject content of the activity: "We are going to continue working with reading in mathematics". Presenting the subject content of the activity was a central part of all introductions before continuing with its purpose: "We are going to have a relay that requires you [pupils] to talk together and agree on a strategy to solve the tasks". He divided the class into five groups of three, each with two cones approximately 15 m apart and continued:

"One by one, you may walk, jog, or run to the other side [where the other cone was placed]. Turn the cone around, and underneath, you will find a task. You can either solve it by yourself or memorise the task and return to the group to solve it together. When you have the answer, you can tell me. If your answer is correct, you may proceed to the next task".

Each group had one cone with one question they started with before continuing to one of the four other tasks. The questions underneath the cones were tasks formulated in texts instead of numbers, requiring the pupils to read before answering. In a field talk, Christian said that he wanted to help pupils realise that reading mathematical tasks required focusing on selecting the correct information to answer the specific problem: "It is a stressful situation for some pupils, so I think it is good to shift the focus". Shifting the focus involved creating a sense of belonging by letting pupils discuss group tactics. This meant pupils had to discuss important information and whether to answer individually or together. At the same time, Christian did not specify the intensity of movement because pupils had different needs to balance physical activity with the subject content. When the activity started, some pupils were running while others were walking. Christian said he intentionally did not instruct the pupils how to solve each task or how many tasks they had to solve. This was because the purpose was for pupils to explore why answering correctly required concentration.

Based on observations and audio recordings, it was common that pupils engaged differently in activities and chose different ways of solving the tasks. In this example, some pupils solved the task whilst at the cone, while others went back to the group to solve the task. It was

evident that pupils were engaged in the activity and with their groups, as some were discussing loudly while others were cheering. It seemed that PAL shifted the dynamics of the lessons, creating more noise, which was allowed because it was seen as contributing to an inclusive atmosphere.

Although different teaching methods were enacted for the same subject content, it was evident that they had various purposes, as Christian explained that "(...) pupils are acting differently in certain situations". For instance, while sitting at the desk provided opportunities for pupils to become familiar with the content, PAL provided pupils with opportunities to engage with reading the tasks thoroughly because pupils were required to move around, collaborate and apply their understanding to solve a task. It was evident that Christian deliberately enacted PAL to support pupils in reading the task thoroughly and understand why taking time to read and sort out the correct information was important. The enactment of PAL was thus perceived to be purposeful in situations where Christian intended the pupils to explore the value of reading in mathematics and to experience why extracting the correct information from the texts was useful. Because PAL was situated in contexts that differed from traditional teaching, a summary of what pupils experienced and how they related to the content was provided at the end of the activity. In this case, Christian drew a parallel from the first activity, where some of the pupils had finished reading quickly, to the last activity and reflected on what would happen if they used more time to read the task more thoroughly. These summaries often happened in a circle outside or after the activity when the class went back in. In a field talk, Christian said summaries were included to help the pupils see the relevance of PAL and other teaching methods.

4.2. "Wanting to bring the PAL teacher back into the classroom"

This theme was developed to capture judgements, choices and actions that were a part of, or a result of, Christian's planning, organising and evaluation of teaching where PAL was enacted. Accordingly, the enactment of PAL was premised on broader ways of thinking about interactions with the pupils. The quotation was chosen to illustrate that enacting PAL had made him reflect upon himself as a teacher in a different light: "It [PAL] brings awareness to me as a teacher, and it makes me want to bring the PAL teacher back into the classroom".

The school culture guided Christian's everyday pedagogical practice. In comparing the project school to where he had previously worked, Christian perceived the current school's culture to resonate with his understanding of education for contributing to pupils' identity formation and growing up to participate in society. In a field talk, Christian said that "it [education] is not necessarily about good grades, but that they [pupils] are doing well". This is not to say that learning outcomes were not central to his pedagogical practice but that a wider perspective was considered equally relevant.

Christian's understanding of the purpose of education was relevant to understanding his choices and judgements about how, when and where PAL was enacted. For instance, in an English lesson, Christian enacted PAL in the teaching of different verbs such as "write", "see", and "find" in the present tense on a smart board and had post-it notes with the past tense inside the school auditorium. "In this task, each group will connect the right words". Christian added in a field talk that "the composition of the groups is central to making PAL work. You [the teacher] have to know the pupils with regards to constructing groups where the pupils feel safe, collaborate, and learn". Observations revealed that the groups could vary depending on the activity. In teaching verbs where PAL was enacted, pupils moved around, talked and used verbs in sentences. Therefore, pupils were often put together in groups of three to four. In other activities, especially those with higher intensity movement, pupils were placed in smaller groups because it allowed them to have rapid discussions. The group size needed to be optimal for its purpose and engage all pupils: "If the groups are too big, some pupils are just watching".

An example of this was a mathematics lesson. To explore fractions,

the teacher laid a rope and asked pupils how to make fractions. Without saying anything, the teacher stepped into the middle of the rope and looked at the pupils. One pupil suddenly shouted, “two-fourths, a half”. During the introduction to the task, the pupils were watching and listening, but when PAL was enacted, it generated opportunities for a different kind of social interaction for the pupils:

“I always hope that the pupils are learning something. But I think that the most important thing is that they get time to think. I see some particular pupils and get the sense that they are too quick to respond. However, at the same time, I also think that those pupils have something to learn - not to talk and let others try”.

Christian said that while some pupils were better academically, others were better socially in that they understood how to work together: “When we have PAL, the social pupils are better equipped to endure encounters with the content. It seems like they are more amenable and can handle challenges together”. Christian used the English verbs as an example of how PAL could engage pupils differently: “In traditional teaching, most pupils would not care. However, PAL engages them because they get to move around and talk about the verbs”. At the same time, Christian was concerned with pupils’ learning: “Although it can be hard to see the learning, I am reminding myself that it cannot always be measured by the fact that they know ten out of ten verbs”.

In addition to what was described as an environment that engaged pupils with the content and created interactions between pupils, in a field talk, Christian also reflected on how he related to the pupils during PAL:

“I notice that I get to unfold myself more. I can be more engaged, moving around and talking with the pupils. They are moving around, and I am moving around. I use the room more. In the classroom [traditional teaching], I mostly stand in front of the class or sit down”.

As the excerpt above shows, Christian thought differently about his choices in teaching where PAL was enacted. Then, Christian usually introduced the subject content and the purpose of the activity before walking around and asking pupils questions. Christian did not only ask questions about the content but was rather concerned with observing and listening to pupils’ participation and asking how to solve the tasks. Thus, he was focused on communicating the strategies, knowledge and skills that pupils needed to solve the tasks. In field talks, Christian said: “I think this relates to being inside [traditional teaching], I might be demanding answers instead of listening to the pupils and asking questions”. To some degree, movement opened up for interactions where Christian and the pupils could engage and unfold differently. Observations revealed that these interactions were both verbal, in that Christian was explaining the activities, listening to the pupils and asking questions, and embodied because, to a larger degree, Christian was modulating and gesticulating the activities, as well as moving around, getting an overview of pupils’ participation in the activities. This way of introducing and overseeing the activity allowed Christian to play an active role, ensuring pupils’ understood the tasks and asking them questions if they did not. At the same time, it was evident that movement created more noise compared to other teaching methods. However, as Christian said: “Good teaching doesn’t have to be quiet. I think there is a perception that where there is quiet, there is learning. But I would equally say that where there is talking, there is learning. PAL demands a certain amount of pedagogical noise”. By allowing himself and his pupils to engage in the subject content by moving and talking, it was evident that Christian meant that “just because it is fun, it does not mean it is without purpose”. The quotation seemed central in that Christian meant that PAL represented another way of teaching that did not represent the traditional view of pupils’ learning. Moreover, it seemed important for him to make sure that it was with a purpose that gave opportunities that were difficult to create through other teaching methods.

5. Discussion

Based on our review of the literature, this is the first study that has used an educational ethnographic approach to explore the enactment of PAL in one teacher’s pedagogical practice. The combination of observations, audio recordings, and field talks has allowed us to generate in-depth and nuanced descriptions of Christian’s enactment of PAL. As such, our findings reveal that the enactment of PAL is complex and intertwined with other teaching methods in the sense that they revolve around the same subject content with different purposes for being enacted. Drawing on a pedagogical perspective where teachers are constitutive of the goals, intentions and processes of teaching, we have called this study an exploration of blurred lines because PAL was not enacted with a set of rigid rules. While overlapping and similar, conceptualising the enactment of PAL has revealed a number of pedagogical aspects which give new aspects to learning environments.

5.1. Creating time and space to stay consciously in the activities

Based on the findings, a pedagogical aspect of PAL was to create time and space for pupils to encounter the subject content. Although a large body of PAL research relates to the result of learning in that it focuses on pupils’ retention of knowledge (e.g., Mavilidi et al., 2018; Norris et al., 2019), our findings indicate that a pedagogical aspect of PAL was a deliberate structuring of the teaching-learning process. Drawing on Uljens’s (1997) work, learning can be distinguished from teaching in that it can only be envisaged to happen. In this vein, our findings indicate that the enactment of PAL relates not only to the results of learning but equally to the process wherein pupils are given time and space to engage more deeply with the content. Creating time and space for pupils to stay in the activities could be equated with what Uljens (1997) calls studying, the bridge between teaching and learning.

In this way, PAL was structured to bridge the teaching-learning process by integrating movement into pupils’ studying, specifically related to exploring and experiencing the subject content. The process of exploring was structured so that pupils could encounter unfamiliar content by drawing on their knowledge and skills rather than being provided with theories to engage with it. The process of experiencing the content was structured so pupils could feel, see and use movement and their bodies to generate first-hand encounters with the content. These ways of structuring pupils’ encounters with the content are not new within the pedagogical field as collaborative learning, inquiry-based learning, and problem-based learning are examples of similar approaches (Barkley et al., 2014; Ellis, 2016; Harland, 1998). However, PAL differs in that it centres around movement. These established pedagogical approaches could collectively be constructive because they are pupil-centred and strive to maximise interaction and critical thinking (Biesta, 2017). This contrasts with traditional teaching methods, which view teachers as the mediator of knowledge and pupils as the recipients. Previous research has, to some degree, positioned PAL as a constructive approach (Lerum et al., 2021; Quarmby et al., 2019), which the findings from the current study support, at least to some degree.

What the findings from this study add, however, is that PAL was planned and organised to create an environment that engaged and sustained a dynamic between the teacher and the pupils as participants in the activity. Thus, this pedagogical aspect of PAL did not shift the responsibility onto the pupils, for which constructive approaches have been criticised (Biesta, 2017). While previous research indicates that PAL can enhance pupils’ engagement with the content (Riley et al., 2017; Sneek et al., 2022), the current study adds that the activity mediates the content by giving pupils time and space to engage with it. This meant that the teacher planned the activity with explicit purposes in mind and became a moderator during the activity to ensure that pupils participated within the frames and rules.

Such an approach to learning resonates with a conception of the

teaching-learning process setting the conditions for the possibility of learning (Byman & Kansanen, 2008). This conception means that teaching does not imply learning, and learning can occur without teaching (Uljens, 1997). By conceptualising the teaching-learning process in this way, a pedagogical aspect of PAL is ensuring pupils understand the learning environment when PAL is enacted rather than focusing on the psychological processes of retaining knowledge. This means being open to new solutions during the activity and letting pupils interpret interactions differently within the frames and rules.

Because the enactment of PAL focussed on the process rather than the result of teaching-learning, our findings indicate that PAL was chosen for purposes beyond or in combination with traditional teaching methods. For instance, in common with previous research, PAL was often planned and enacted for social purposes (Chalkley et al., 2022). This meant that while learning was an important goal of the planning of PAL, the organising often focused on pupils' collaboration and on how to solve tasks together. It seemed that PAL offered an opportunity for teaching that was difficult to achieve with other teaching methods, especially within the confines of the classroom. However, focusing on the social aspects of teaching meant letting go of focusing on the result of learning. This meant letting the activity run its course and using a summary to let pupils reflect on their experiences while being physically active. Again, drawing on (Uljens, 1997), in viewing PAL from a pedagogical perspective, we understand the integration of movement into tasks as supporting pupils' subjective growth through the process of learning. In contrast to earlier definitions of PAL (e.g., Daly-Smith et al., 2021; Watson et al., 2017), this understanding includes the broader purposes of education and empowers teachers to be the ones who plan, organise and evaluate PAL as a holistic part of everyday practice. This means planning and organising activities that support, challenge, and stimulate pupils' identities through the teaching-learning process outlined above.

5.2. Pedagogical intentionality

A further pedagogical aspect of PAL was related to how communication unfolded between the teacher and pupils in the aforementioned teaching-learning process. This meant pupils were perceived as active participants in shaping the teaching-learning process. That is not to say that it was a symmetrical relationship between the teacher and the pupils (Kansanen, 2003), but that interactions were more dynamic in PAL compared to other teaching methods. Similar to pedagogy as envisaged by Biesta (2020b), a pedagogical aspect of PAL was to encourage a dialogical and reflective practice that required conscious thought about who the pupils were and what group sizes would be productive to the subject content and movement. To some degree, the movement was situated as the centre of dialogical and reflective interactions to get to know the pupils.

Additionally, PAL created higher activity levels and noise, which have been equated with chaos and a decrease in pupils' focus and eagerness to learn (Jonasdottir et al., 2015; Madsen et al., 2020). The tension between chaos and order meant the teacher had to set the conditions for possible encounters and engagement with the activity. Although the added noise challenged traditional teaching norms, the so-called 'pedagogical noise' allowed pupils to engage more freely and actively in activities according to its purpose. Pedagogical noise required a mutual understanding between the teacher and the pupils for the conditions and purposes of enabling such noise.

Findings from this study indicate that mutual understanding between the teacher and pupils was often created in introducing the activity. In teaching where PAL was enacted, the aim and purposes of the activity were explicitly emphasised. The introduction also included the rules, subject content, group sizes, and the arena. In many cases, the teacher urged the pupils to reflect on strategies and competencies needed to solve tasks. This mutual understanding could be characterised by what Kansanen (2003) calls a pedagogical interaction in that it

articulates the intentionality of the teaching. In terms of what purpose is envisaged for the pupils, Uljens (1997) argues that pedagogical intentions are always oriented towards what is meaningful. The key to understanding communication in and of PAL was, consistent with previous research, oriented towards the relationship with the pupils (Madsen et al., 2020) and underpinned by competencies needed to encounter the activity in an intended way. Therefore, a pedagogical aspect of PAL was, in keeping with Kansanen (1999, 2003), to bring the pupils into the decisions that justified the pedagogical practice.

With a focus on articulating the intentionality envisaged for pupils, a pedagogical aspect of PAL was related to skills and knowledge central for pupils to encounter the activities. In previous qualitative PAL research, teachers have perceived movement to bring new pedagogical opportunities into teaching (Madsen et al., 2020; Schmidt et al., 2022). The current study's opportunities revolved around collaboration, critical thinking, and identity formation, which could align with the OECD's educational rhetoric about long-lasting competencies rather than content-based knowledge (Benade, 2014; Hilt et al., 2019; OECD, 2014). Such competencies relate to how education should prepare pupils for an uncertain world. Although previous research has criticised the emphasis on 21st-century skills in education for being neo-liberal and creating ideal pupils (Morgan, 2016), others argue for intertwining the OECD-advocated competencies with the Norwegian curriculum (LK20) ideologies on social democratic progressivism (Hilt et al., 2019). Based on the findings of this study, a pedagogical aspect of enacting PAL was that a one-sided focus on pupils' knowledge in the activities could undermine the broader purposes of education (Mandelid et al., 2022). Furthermore, a one-sided focus on skills may risk undermining the factual knowledge of the curriculum (Schmidt et al., 2022). Therefore, integrating movement into the teaching-learning process was concerned with simultaneously immersing pupils in skills and knowledge.

For this study, we have outlined and discussed potential pedagogical aspects of a PAL by drawing on the pedagogical practice of one teacher in one school in Norway. Consistent with previous research, the enactment of PAL may take different forms underpinned by educational judgements guided by values (Mandelid et al., 2022). In addition, broader national and international policies have been found to influence the enactment of PAL (Chalkley et al., 2022). It should, therefore, be noted that teachers understand and enact PAL differently. For the current study, the Norwegian national curriculum might be especially relevant for conceptualising pedagogical aspects of PAL. For instance, LK20's democratic values regarding participation and equality might have underpinned the enactment of PAL because the social environments and pupils' belonging were central perspectives. Furthermore, Norwegian teachers have a degree of freedom to interpret the curriculum, which Dieudé and Prøitz (2022) point out might also influence pedagogical practices. However, the findings from this study have the potential to inform an understanding of the teaching-learning process as one that reaches beyond the current omnipresent learning terms in the PAL field (Biesta, 2005; Standish, 2019).

6. Conclusion

Based on Continental European pedagogy, we have placed PAL as one potential teaching method that may have different purposes in education and employed educational ethnography to guide this exploration of one teacher's pedagogical practice to conceptualise pedagogical aspects of PAL. However, charting the enactment of PAL has revealed blurred lines between underpinning pedagogies because, as our findings indicate, it is intertwined and dependent on other teaching methods. Based on the empirical exploration of the enactment of PAL, we have outlined and discussed pedagogical aspects that constitute PAL as activities where movement is integrated to support pupils' subjective growth through the process of learning. Our findings propose that PAL is underpinned by pedagogical aspects oriented towards relating the wider planning and organising of teaching to the specific purpose of

integrating movement. Such pedagogical aspects meant integrating movement to create time and space for pupils to engage with the subject content, thereby bridging teaching and learning by helping pupils understand the intentions of the activities. Central to these aspects was structuring the activities by setting clear goals, frames and rules for pupils' participation and raising their awareness of the skills and knowledge pupils needed to solve the tasks. In this sense, PAL opened up a broader way of communicating and building relationships with the pupils that were verbal and non-verbal.

Even though the findings in this study are from one school in the Norwegian context, we conclude that contextualised findings, such as the ones in this study, might contribute to broadening the opportunities for PAL. For instance, this study has contributed to a more nuanced understanding of aspects that underpin the enactment of PAL in a pedagogical practice. Moreover, the study could be a departure point for future research that aims to utilise a pedagogical perspective to explore the teaching-learning process of PAL wherein teachers are not simply an element of but rather constitutive of the teaching-learning process. Rather than provide a consensus on the pedagogical aspects of PAL, we encourage researchers to explore PAL in other educational contexts.

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Declaration of competing interest

All authors of this manuscript have approved the final version and confirm that the current study is original, has not been published, nor is it currently under consideration for publication elsewhere. The authors declare that there is no conflict of interest. Sparebankstiftelsen supported the authors of this manuscript. However, the funders had no role in the study design, data analysis and interpretation or preparation of the manuscript.

Data availability

Data will be made available on request.

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