

Meaningful physical education: Towards an embodied pedagogy

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Abstract

International research on students' meaningful experiences in physical education (PE) has led to the proposal of the Meaningful PE approach, aiming to guide pedagogical principles to support students' meaningful experiences in PE. The approach currently includes democratic and reflective pedagogical principles. With this paper, we aim to contribute to the Meaningful PE approach by emphasizing the need to address a third pedagogical principle that attends to pre-reflective bodily dimensions of students' meaningful experiences in PE. The democratic and reflective pedagogical principles are based on a reflective interpretation of the significance an experience holds. While this approach is highly valuable, the retrospective nature of these principles may unintentionally overlook significant pre-reflective bodily dimensions of experience. Drawing on a phenomenological concept of embodiment, we use key structures of our pre-reflective bodily engagement with the world to analyse features that young people describe as significantly contributing to their meaningful experiences in PE and youth sport: social interaction, challenge, motor competence, fun, and personally relevant learning. Our analysis reveals that pre-reflective bodily meaningful experiences emerge as something in-between the subject and the world. These experiences can be affected by others in body-to-body encounters and contain a dimension of negativity related to the pre-reflective, relational, and active-passive structure of our lived experience. Based on our analysis, we propose that teaching to support meaningful experiences in PE must address the dialectical interplay between reflective and pre-reflective dimensions. Therefore, we advocate for adding an embodied pedagogical principle to the Meaningful PE approach alongside the reflective and democratic principles.

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Introduction

Research on meaningful experiences in physical education (PE) has gained increased attention in recent years (Beni, 2021; Beni et al., 2017, 2019, 2023; Fletcher and Ní Chróinín, 2021). This has led to the development of a Meaningful PE approach (Fletcher et al., 2021), aiming to guide teachers' pedagogical decision-making through democratic and reflective pedagogical principles that support students' meaningful experiences in PE (Fletcher and Ní Chróinín, 2021). With this paper, we aim to add to the ongoing conversation by emphasizing the need to include a pedagogical principle that incorporates pre-reflective bodily dimensions of students' meaningful experiences in PE.

The democratic and reflective pedagogical principles are informed by key features identified by young people as significantly contributing to their meaningful experiences in PE and youth sports (Beni et al., 2017), and studies on how PE teachers and educators apply these concepts to prioritize meaningfulness (Beni, 2021; Beni et al., 2019, 2023). The principles play an essential role in guiding both teachers and students to recognize, evaluate, and attach personal significance to their PE experiences (Fletcher and Ní Chróinín, 2021; Thorburn and Stolz, 2020). Because the principles are based on a reflective interpretation of the personal significance of experiences in PE (Fletcher and Ní Chróinín, 2021; Martela and Steger, 2016), they may potentially (and unintentionally) overlook significant dimensions of lived experience. For instance, when PE students are immersed in a ballgame, they perceive the unfolding movements between player and playground (Kretchmar, 2013) as a lived experience prior to reflection. Perception is an active and embodied engagement with the world, and thus essentially bodily (Merleau-Ponty, 2012). Students' meaningful experience in a ballgame is, therefore, rooted in a pre-reflective bodily experience of playing, while their subsequent reflections on the ballgame may also influence their further bodily engagement and so on (Merleau-Ponty, 2012). This underscores the dialectical relationship between pre-reflective and reflective experiences. Indeed, several scholars (see e.g. Lambert, 2020; O'Connor, 2019; Thorburn, 2021) emphasize the importance of paying attention to both pre-reflective and reflective experiences when addressing student meaningfulness in PE.

The purpose of the paper is to explore the pre-reflective bodily foundation of students' meaningful experiences in PE. We thereby aim to provide a foundation for suggesting the addition of a pedagogical principle that addresses pre-reflective bodily dimensions of experience to the theoretical underpinning of the Meaningful PE approach.

We begin the paper by exploring the nature of the democratic and reflective pedagogical principles grounded in the Meaningful PE approach. After that, we propose embodiment as an additional element to include more actively the pre-reflective bodily dimensions of students' meaningful experiences in PE. We do this by interrogating the features of what young people have described as significantly contributing to the meaningfulness of their experiences (Beni et al., 2017), which can provide the basis for examining pre-reflective bodily dimensions of students' meaningful experiences. Drawing on a phenomenological concept of embodiment, we present key structures of a pre-reflective bodily engagement and use them to pursue an embodied

account of the features of the Meaningful PE approach. The analysis will therefore engage in an ontological examination grounded in the concrete practice of PE, establishing an epistemological framework that can inform the addition of an embodied pedagogical principle to the Meaningful PE approach. At the end of the paper, we discuss the potential contribution the pre-reflective bodily perspective may have for supporting students' meaningful experiences in PE.

Meaningful experiences

Drawing on existential and phenomenological viewpoints (Kretchmar, 2006b; Metheny, 1968), Fletcher and Ní Chróinín (2021) emphasize how meaningful experiences are characterized by their subjective significance, relating to meanings of a given event associated with subjective interests, emotions, and feelings. Drawing from psychological research (Martela and Steger, 2016), they further highlight that meaningful experiences in PE involve students being attentive to subjective purposes of movement, personal judgements related to the significance of the emotional value of an experience, and a sense of connectedness to other life experiences (Fletcher et al., 2021). In this way, meaningfulness can be understood as a reflective interpretation of the personal significance an experience holds in PE and involves students becoming aware and making sense of that experience (Fletcher and Ní Chróinín, 2021).

Building on this conceptualization of meaningful experiences together with empirical knowledge of features that young people described as significantly contributing to the meaningfulness of their experiences in PE and youth sport (Beni et al., 2017), Fletcher and Ní Chróinín (2021) propose a student-centred approach to PE with an emphasis on democratic and reflective pedagogical principles.

Pedagogical principles

The democratic principle emphasizes inclusivity, ensuring that students have opportunities to participate in decision-making on activities that resonate with their interests and experiences, to foster a sense of ownership among PE students. The reflective principle underscores students' critical examination and interpretation of their PE experiences, including bodily sensations, aiming to deepen their understanding of how these experiences contribute to their personal development and well-being (Fletcher and Ní Chróinín, 2021).

The pedagogical principles emphasize embodied experiences as part of the reflection process (Fletcher and Ní Chróinín, 2021). The time-bound nature of the conceptualization of meaningful experiences in which the principles are grounded requires a retrospective attention to the embodied engagement (Fletcher and Ní Chróinín, 2021), potentially overlooking more immediate bodily dimensions of experience in PE. It is in the spirit of contributing to the reflective approach that we find it relevant to examine the pre-reflective foundation for students' meaningful experiences in PE. Therefore, we turn to the features of the Meaningful PE approach (Beni et al., 2017).

Features of students' meaningful experiences in PE

In a review of 50 empirical research articles, Beni et al. (2017) found support for five key features that young people described as significantly contributing to the meaningfulness of their experiences in PE and youth sport: social interaction, challenge, motor competence, fun, and personally relevant learning. These five features provide a useful empirical basis for analysing the pre-reflective bodily

foundation of students' meaningful experiences in PE, which may lay an epistemological groundwork for empirically exploring how PE teachers can support students' meaningful experiences on a pre-reflective level.

Phenomenology of embodiment

The first step in our exploration will be to provide an analytical framework that addresses pre-reflective bodily dimensions of experience. We therefore turn to phenomenology, starting with Edmund Husserl's examination of the lifeworld (*Lebenswelt*), which can contribute to understanding the relationship between pre-reflective and reflective dimensions in the features of the Meaningful PE approach.

Lived experience

According to Husserl (1970), lived experience encompasses our immediate engagement with the world, which carries an original significance forming an existential pre-reflective core of meaning. Pre-reflective experiences are not conscious actions but rather perceptions of, for example, running that form the background against which any reflections on running stand out. Reflecting on running can followingly influence our pre-reflective engagement and this underscores the ongoing dialectical relationship between pre-reflective and reflective experiences. It also emphasizes that our pre-reflective experiences serve as the foundation for our reflective experiences and, thus, form a tacit background for our meaningful experiences on a reflective level.

Embodiment

Merleau-Ponty argued that our lived experience of the world is essentially embodied. Embodiment refers to a double concept of our bodily nature which is the lived body we are (*Leib*) and the physical body we have (*Körper*) (Merleau-Ponty, 2012). The double concept maintains that we perceive the world in a direct engagement, like when we dip our toes in the pool to grasp the temperature of the water, and lived experience thus becomes lived bodily experience. The concept also maintains that we can experience our body as an object; however, only through reflective distancing from the lived body we are (Aggerholm, 2024; Böhme, 2010). The double concept of the body can inform an account of embodiment, which acknowledges a dialectic relationship between bodily pre-reflective and reflective experiences. In the following sections, we present three key structures of an account of embodiment to prepare the analysis of pre-reflective dimensions of the features of meaningful experiences in PE.

The pre-reflective structure of the body

In his concept of body schema, Merleau-Ponty suggests that our bodies have an inherent, pre-reflective understanding of the world. To truly understand the world, we need bodily interaction with it, such as squeezing a sponge to grasp its softness (De Jaegher and Di Paolo, 2007), emphasizing the strong link between movement and perception (Merleau-Ponty, 2012). Essentially, what we can do with the world shapes our perception of it, including the bodily habits that allow for skilful interaction with the world. According to Merleau-Ponty, our pre-reflective awareness of existing in the world is not based on thinking but rather on our capabilities. Therefore,

consciousness is originally an ‘I-can’ rather than an ‘I think’. This highlights that the fundamental significance of our pre-reflective consciousness is essentially motor-based. Therefore, our lived bodies can be seen as a core of pre-reflective meaning that supports our involvement in and with the world.

The relational structure of the body

A further classic phenomenological insight is that consciousness is always consciousness of something. It is directed, which is expressed in the phenomenological account of intentionality. This directedness is, on Merleau-Ponty’s account, a bodily relation at the outset. Our original relation with the world is, therefore, carried by a motor intentionality (Merleau-Ponty, 2012). We relate to the world by directing our vision and movements towards it, and we move in ways that are influenced both by our bodily dispositions and by the affective affordance of the world (Fuchs, 2016). The space around us is always charged with affective qualities as things appear to us in a certain way, for instance, interesting or joyful, and in this sense, our motor intentionality is also an affective intentionality.

When we learn new movements, we incorporate them into our body schema. Through such incorporation, our lived body pervades the world it engages with, for example, the racket that ceases to be an object for the tennis player as it becomes an area of sensitivity (Merleau-Ponty, 2012). Incorporating new movements means inhabiting a new world of movement through our bodies’ motor sense.

This concept extends to relationships with others where two or more embodied subjects can interact on a bodily level, a concept Merleau-Ponty (2012) refers to as intercorporeality. Intercorporeality describes how our bodies are fundamentally intertwined with and responsive to the bodies of others, creating a shared, pre-reflective space of mutual perception and interaction. For example, this can occur when there is a bodily resonance between the movement of two people in a close dance (Fuchs, 2016). This emphasizes that our bodily subjectivity is inherently situated and relational, and continuously shaped by our interaction with the world around us. Incorporating new movements brings forth new bodily meaning in the world, which we can subsequently take up and reflect on.

The active–passive structure of the body

While Merleau-Ponty’s notion of embodiment emphasizes the active sense-making in our dealings with the world, Gernot Böhme (2010) has drawn attention to how bodily subjectivity is also grounded in more pathic forms of existence. Hence, as lived-bodily beings, sense-making consists of both an active and passive structure. This notion emphasizes that our lived body is first and foremost something that is given to us. For example, when riding a bike at high speed, the feeling of wind on our face and the burning sensation in our legs as they tire are simultaneously a feeling one has oneself and a feeling of the self. Bodily feeling is always a self-feeling as we are the ones experiencing and we experience *our* particular body. We are affected, moved or touched by the world through various forms of bodily sensations, and we in turn actively engage with how the world has passively affected us (Böhme, 2010). The active–passive structure of our lived body thus emphasizes that we are both passively moved by the world and actively move toward, along, against or away from the world on a pre-reflective level (Sheets-Johnstone, 1999).

In summary, our pre-reflective engagement with the world is relational and involves an active–passive structure of the body. This can point to a realm of meaning underneath the reflective experience. Lived bodily experience holds an original signification, which Merleau-Ponty also describes in the case of movement as a motor signification and relates to the concept of ‘I-can’ (Merleau-Ponty, 2012: 105). Considering this, meaningful experience can arguably pertain to the immediate and pre-reflective engagement with the world and others. A comforting hand on the shoulder can be meaningful before we reflect on it, and so can the completion of a pass to another or the successful choreography between members of a group. The phenomenological account of pre-reflective experience can, thus, direct our attention to a dimension of meaningful experience below the level of reflection. In the following section, we will analyse how this embodied dimension can be of value in PE.

Meaningful bodily experience

Drawing on the embodied account of experience, the next step in our examination is to analyse the features of meaningful experiences in PE. The exploration thus draws on a phenomenological ontology of experience and applies it at an ontic level¹ to the analysis of students’ meaningful experiences in PE (Køster and Fernandez, 2021).

Social interaction

According to Beni et al. (2017), social interactions significantly contribute to students’ meaningful experiences in PE and youth sport when they sense a connection and community with peers and others in the movement context (e.g. coaches, teachers, spectators). From an embodied perspective, social interaction can be viewed as intercorporeality (Merleau-Ponty, 2012). This is particularly relevant in PE as the nature of the subject often involves body-to-body encounters. Imagine two PE students playing tennis. The movements of one student directly influence the movements of the other who, in turn, influences the first player before conscious reflection: ‘In a fluent phase of the game, even before one player strikes the ball, the other’s reaction unfolds, and this already influences the first player’s initial action’ (Fuchs and De Jaegher, 2009: 474). The excitement of one student manifests itself in his or her bodily expression which subsequently influences the other student to a corresponding engagement before either of them is aware of it. Their gestures, emotional expressions, gazes, and so on become deeply intertwined, continuously modifying how they each perceive and experience the tennis match, ‘...as if the other person’s intentions inhabited my body, or as if my intentions inhabited his body’ (Merleau-Ponty, 2012: 191).

The pre-reflective structure of embodiment can help us understand that the bodily emotions of the two students in the example are not merely a reflective stance towards the other but are expressed bodily. This notion of embodied affectivity is crucial because lived bodily emotions like interest, frustration, or anxiety (Leib) become visible (Körper) to the other student through their embodied engagement. It allows the other student to perceive and experience these emotions in a direct bodily manner (Fuchs, 2016; Merleau-Ponty, 2012).

The notion of embodied affectivity can help shed light on the relational dimension of the intercorporeal dialogue between the two students as an embodied interaffective dialogue (Fuchs, 2016). The students thus coordinate their expressive movements, and their coordination can gain such momentum that it overrides their individual intentions and emotions (Fuchs and De Jaegher, 2009). During this phase, their affective intentionality is directed towards what has been described

as the in-between states of continuous fluctuation between synchronized and desynchronized (Fuchs and De Jaegher, 2009). Here, the 'in-between' becomes the source of their affective intentionality, which is a shared one and not necessarily attributable to either of them. In this sense, emotions and affections become an interactive or shared phenomenon (Fuchs, 2016).

With the notion of interaffectivity, the active–passive structure of embodiment can help us understand how the two students can affect each other's experiences (Fuchs, 2016), or in other words, the two students move and are moved by each other's embodied affectivity in a continuous interplay. The students thus co-create their experiences by coordinating their expressive movements with each other (Fuchs and De Jaegher, 2009). If we can affect each other's experiences on a pre-reflective level, it suggests that we can also affect each other's meaningful experiences on a pre-reflective level through social interactions.

Thus, the embodied analysis can contribute to emphasizing how the meaningfulness of students' experiences in PE can be affected on a pre-reflective level by other students' and teachers' affective participation in body-to-body encounters.

Challenge

Engaging in activities that provide an appropriate challenge for participants is another important feature of Meaningful PE (Beni et al., 2017). The feature of challenge pertains to the relative difficulty of a task for learners and is related to students' sense of achievement in both individual challenges and competition. From an embodied perspective, challenges in PE can be viewed as an engagement with resistance provided by an ambiguous experience of 'I-can' and 'I-cannot' (Aggerholm, 2024; Kretchmar, 1975). Imagine a PE student playing basketball and shooting at the hoop from a new distance. The student may experience the challenge as a test that is both impregnable and vulnerable. Simultaneously it 'defies' the student to solve its riddles and yet 'invites' him or her to try; the challenge provides both a 'yes you can' and a 'no you cannot', revealing both an attraction and a repulsion (Kretchmar, 1975: 24–25). The student may thus experience voluntarily engaging with the challenge despite the resistance it provides (Jespersen, 2003). The ambiguity of challenge thus presents itself as an appealing or sweet tension of uncertainty of the outcome, which we find ourselves silently called to engage with (Kretchmar, 1975). The ambiguity of challenge also provides a basis for contests, maintaining that sporting contests are only perceived as appealing if the challenge of doing better than another person or team preserves the uncertainty of the outcome (Kretchmar, 1975).

The pre-reflective structure of embodiment can help us understand challenges as an experience of motor resistance (Merleau-Ponty, 2012). In this perspective, challenges in PE can be related to an experience of not-yet-knowing-how pertaining to capabilities (Bollnow, 1978).

The relational structure of embodiment can help us to understand a challenge as an attractive motor expectation (Fuchs, 2016). By shooting at the hoop, the student's motor intentionality embodies an expectation of scoring provided by the relative motor resistance against scoring. If guaranteed to score every time the student might challenge him or herself by voluntarily increasing resistance, for example, shooting from a further distance. If guaranteed to fail, he or she would likely do the opposite or simply stop playing. The challenge thus appears as an attractive or appealing motor resistance provided by the balance between 'I-can' and 'I-cannot'. An appropriate challenge makes us embody an expectation of incorporating a new motor core of significance that silently calls us to engage. From this perspective, a challenge is a meaningful way of relating to the world on a pre-reflective level.

This is also the case in contests. Engaging in sports and games, the opponent or opposing team provides a very rich challenge where the contest or the interrelational dynamics in between the players become the source of the players' attractive embodied expectation (Fuchs and De Jaegher, 2009). For example, when playing a basketball game, the students' embodied expectations extend beyond their individual 'I-cans' to consider whether their shared 'I-cans' surpass those of the opposing team, which emerge out of our intercorporeal dialogues (Fuchs and De Jaegher, 2009). Not only is overcoming resistance an existential condition (Sloterdijk, 2013), but Bernard Suits (1978) argues that even in a utopian world where all material needs are met, humans would still voluntarily seek game challenges. Encountering bodily challenges in PE, whether as tests or contests, can, thus, be conceived as inherently attractive and meaningful on an existential and embodied level of experience.

The active-passive structure of embodiment can help us understand that the pre-reflective experience of challenges is related to the process of continuity and discontinuity, thus containing a degree of negativity (Aggerholm, 2020). The challenge of shooting at the hoop departs from the horizon of our bodily capabilities toward a qualification of one's 'I-cans'. This can be described as a continuous process requiring active repetition for the potential qualification (Aggerholm et al., 2018). In addition to continuity, the experiential process of challenge contains discontinuity (Brinkmann and Giese, 2023). The experience of not-yet-knowing-how, is constitutive of the challenge, which can be described as a passive process of experience that contains negativity. It is the negative dimension of the experiencing process, where we encounter the limits of our 'I-cans' and a possibility of broadening our horizon of movements, that makes a challenge appear. The negative dimension of experience is thus not to be understood as something bad but as the very foundation of the experience of challenge. However, it emphasizes that the sweet tension of challenges may not always be immediately joyful (Aggerholm, 2020).

The analysis can contribute to highlighting that the pre-reflective experience of a challenge can be meaningful on an existential and embodied level; however, to experience the challenge as meaningful, PE students must be open to and embrace its uncertainty.

Motor competence

Beni et al. (2017) demonstrated that students' perception of relatively high levels of motor competence was found to be an important feature of students' meaningful experiences. From an embodied perspective, motor competence can be understood as related to an experience of 'I-can'. Imagine participating in a well-known activity. At moments we may experience moving around in familiar ways, interacting and navigating effortlessly in and with the activity. 'I can thus – by means of my body as a power for a certain number of familiar actions – settle into my surroundings as an ensemble of manipulanda without intending my body or my surroundings...' (Merleau-Ponty, 2012: 107).

The pre-reflective structure of embodiment can help us understand the experience of 'I-can' as an immediate knowing-how-to engage with the world. In this sense, our 'I-cans' or motor capabilities are part of our meaningful core that sustains our engagement in and with the world and can thus be understood as meaningful in themselves before reflection (Merleau-Ponty, 2012). However, while motor competence in a reflective understanding is viewed as conscious skills that can be interpreted relatively, our 'I-cans' are our implicit, embodied potentialities for action in and with the world.

The relational structure can help us understand motor competence as part of our foundation for relating to the world. We always already perceive the world with a motor intentionality that is coloured by our 'I-cans', emphasizing that the affective affordance of the world is related to what we can do with it (Fuchs, 2016). This underscores that motor capabilities are not only to be understood

as the body understanding a movement but rather the body understanding the world in a given situation and context, and how to move in and with it. Engaging in and with the world, 'I-cans' can thus be understood as the very foundation for revealing new meaning in the world, and thus for revealing new meaningful experiences on a pre-reflective level (Merleau-Ponty, 2012).

This is also the case in interactions with others. Extended and repeated intercorporeal encounters between students in a dance may lead not only to new 'I-cans' but also to a pre-reflective motor sense of how their shared interaction may unfold (Fuchs, 2016). The students' collective history of mutual interaction and their implicit relational knowing (Fuchs, 2016) are the foundation for revealing new shared intercorporeal meaning.

Incorporating new movements, the active-passive structure of embodiment can help us understand that we can expand our 'I-cans' and thereby our pre-reflective core of significance. Expanding our 'I-cans' and bodily habits can thus create a new way of seeing and settling into the world, that can be understood as meaningful in itself, which we can subsequently take up and reflect on (Böhme, 2010).

The embodied analysis can contribute to highlighting that incorporating new movements and thus expanding PE students' arrays of 'I-cans' can be experienced as meaningful in itself.

Fun

Many studies have demonstrated that fun is an important feature in PE and youth sport for participants' meaningful experiences (Beni et al., 2017). However, the Meaningful PE approach argues that prioritizing fun over education is not desirable, and therefore positions fun as an important vehicle for meaningful experiences in PE, but not the sole focus. Kretchmar (2006b: 7) distinguishes between fun and delight in relation to quality experiences in PE:

Delight ... is the kind of feeling we encounter when we are carried away, enthralled, captivated. In the clutches of delight, we often forget what time it is or how long we have been doing something. When physical education is merely fun, our students are, to be sure, entertained, pleased, more-or-less interested, and happy. On the other hand, when students experience delight, they are transported from the mundane to the memorable.... Physical education will be changed from merely a good part of their school day to an unforgettable part of their educational experience.

This distinction is useful for understanding the meaning and value of fun in PE. Kretchmar's account of PE as merely fun, when focusing on entertaining and pleasing over educating, resembles the negative connotations that a focus on fun is often associated with (see, e.g. Lyngstad et al., 2020). For the purpose of this paper, we therefore prefer the concept of joy to refer to the promotion of excitement, delight and fun in PE.

The Norwegian philosopher Arne Naes touched on the depth of the experience of joy. He defines joy as a positive affect and to analyse it, he differentiates between *Hilaritas* and *Titillatio*. *Hilaritas* refers to an all-embracing joy, which we can experience when all parts of body and mind are active. *Titillatio* refers to a smaller or partial joy, which we can experience when only some parts of body and mind are actively engaged (Breivik, 2019, 2021). The differentiation in the experience of joy is also addressed in the German philosopher Edith Stein's work (1989). She argues that emotions like joy vary in their affective impact on the subject concerning their depth, duration and intensity. In alignment with the thoughts of Kretchmar, Naes, and Stein, the emotion of joy may be distinguished from fun, with the latter being more superficial and transient and the former reflecting a more profound emotion.

With the pre-reflective structure of embodiment, we may understand the joy of movement as an emotion that is felt bodily (Fuchs, 2016). Running in-the-zone we may feel the joy of moving not as a mere inner mental state but rather as a bodily feeling of, for example, exhilaration (Stein, 1989). The emotion of joy colours our perceptions and actions, which we can understand with the active–passive structure of embodiment.

We experience the pre-reflective joy of movement through what Fuchs (2016) refers to as bodily resonance. The pre-reflective experience of running in-the-zone is passively given to us through various bodily sensations, like the feeling of a rhythm between our breath, cadence, and muscle activity, which may permeate our body with a trembling excitement of joy. The joy of movement is thus an emotion that passively pervades us through our active engagement, and which subsequently taints our movements with a tendency to engage with excitement. The joy of movement thus permeates our perception of the particular activity we are engaged with and gives our pre-reflective bodily experience of the activity a significance and weight that our movements would not have without the emotion (Fuchs, 2016).

According to Stein, emotions are intentional states, meaning that, when feeling joy, we are directed at the world (Stein, 1989). The joy of movement thus derives its intentionality from the world, which we can understand with the relational structure of embodiment. The joy of movement emerges in between the subject and the world (Fuchs, 2016). While running, we relate and coordinate our movements with the world, and we are affected by how the world responds to our movements. In this sense, the joy of movement is something that arises out of our affective engagement and how the world responds. This is also the case in social interactions, as mentioned earlier, where emotions emerge out of a dyadic interaffective state (Fuchs, 2016). The shared affect during a joyful game of catch arises from the ‘in-between’, in which all players participate but none of them fully control (Fuchs and De Jaegher, 2009). Thus, emotions, such as the joy of movement, emerge, change and circulate between the subject and the world in corporeal or intercorporeal dialogues (Fuchs, 2016). The embodied analysis thus decenters the source of the joy of movement, which indicates that to experience the joy of movement in PE may be a matter of being open to, allowing oneself to be affected by, and engaging with how the world affects us.

The pre-reflective and relational structure of embodiment can also help us understand the joy of movement related to the expansion of our ‘I-cans’. According to Naes, joy is dependent on our active development or perfecting of our body and mind (Breivik, 2019). Similarly, Sloterdijk (2013) indicates that joy is intrinsic to the process of practising, where the (continuous and discontinuous) experience of qualification can lead to a sense of fulfilment. This notion indicates that the joy of movement is related to the transcendence and expansion of our bodily pre-understanding of the world. We may recognize this from the joy of mastering a hard-won skill, which we may experience even more profoundly the greater the effort that is required (Breivik, 2019). This indicates that the joy of movement in PE may also emerge out of expanding our motor significance.

The embodied analysis emphasizes that the pre-reflective joy of movement is meaningful in itself, and to experience this joy, PE students must attend and engage with the ways the world affects them.

Personally relevant learning

Beni et al. (2017) identified that PE and youth sport are found to be more meaningful when participants recognize the significance of what they are learning in connection to personal aspects of their daily lives beyond the school or community setting. Personally relevant learning in PE

from an embodied perspective may be related to growing new or expanding existing motor habits (Merleau-Ponty, 2012). This may be understood as engaging in activities that emotionally resonate with and expand the student's pre-reflective core of significance (Fuchs, 2016; Gallagher, 1992). Imagine a novice PE student in a dance class, struggling to keep up and feeling frustrated. The student may experience being incapable and lacking prior dance experiences, potentially viewing the activity as meaningless. Conversely, imagine a student in the same class also struggling with dance moves, but slowly improving his or her movements in synchronization with peers and the music. Gradually, this student may experience settling into the dance and the dance settling into him or her (Gadamer, 2004).

Bodily habits are our pre-reflective embodied patterns of behaviour, which maintain that we carry a bodily preunderstanding of the world related to our 'I-cans' (Gallagher, 1992). Where 'I-can' encompasses a practical sense of knowing-how-to handle the world that is implicit in our bodily engagements, bodily habits are significant, ingrained patterns of behaviour that colour our perception and interaction with the world. Our motor habits are thus our (personal) pre-reflective core of significance.

The body schema enables us to relate and coordinate our movements in and with the world intuitively, providing a horizon of potential actions available to us, that is shaped by our bodily pre-understanding of the world (Gallagher, 1992; Merleau-Ponty, 2012). Incorporating new movements, like the latter PE student in the example with the dance class, broadens our bodily pre-understanding of the world and thus our horizon of movements. Continuous encounters and expansion of our movement horizon within, for example, dance environments will gradually affect our pre-reflective core of significance, which we can subsequently reflect on as personally relevant learning.

In intercorporeal encounters, two or more partners' horizons of movements interact, potentially leading to a fusion of horizons (Gallagher, 1992). The fusion pertains to the possible expansion of each partner's horizon of movement in body-to-body dialogues, which is particularly relevant in PE. For example, when participating in badminton, the PE teacher has an opportunity to push the students to new and unforeseen movements in a direct bodily manner and thus broaden the students' horizon of movements and vice versa (Fuchs and De Jaegher, 2009; Merleau-Ponty, 2012). However, for the fusion to happen the intercorporeal dialogue must entail a degree of autonomy, where the horizon of movement of all participants engaged is mutually acknowledged and challenged (Fuchs and De Jaegher, 2009). Imagine the PE teacher playing badminton with a student, always placing shots out of the student's reach leaving him or her without any chance to interact. This illustrates why the PE teacher must engage the students to be open to new possibilities in close relation to their 'I-cans', just as the PE teacher must be open to how the students respond to the engagement of the teacher.

The active-passive structure of embodiment can help us understand that the process of expanding our horizon of movement contains a degree of negativity (Gadamer, 2004) as mentioned earlier related to the features of challenge and motor competence, and this is a moment of subjectivity (Böhme, 2014). Practising, for example, juggling, we may continuously drop the balls and experience our engagement as frustrating. However, 'Only through negative instances do we acquire new experiences' (Gadamer, 2004: 350). The process of expanding our horizon of movements thus entails an opening to the world, a re-understanding and transformation of existing experiences, which transcends the moving subject. The negative dimension thus plays an important role in providing a new core of significance.

The embodied analysis can contribute to emphasizing that broadening a PE student's horizon of movement must depart from their current bodily pre-understanding of the world to be experienced

as meaningful. Providing opportunities to move that are aligned with their current movement horizon can describe an embodied way to provide students with personally relevant learning.

To sum up, our analysis in this section has revealed that students' meaningful experiences emerge pre-reflectively as something in between the subject and the world, which can be affected by others in body-to-body encounters and contain a dimension of negativity in relation to the pre-reflective, relational, and active-passive structure of lived experience. As these notions are not emphasized in the democratic and reflective pedagogical principles of the Meaningful PE approach, the analysis can justify and provide the foundation for the addition of a pedagogy that takes into account pre-reflective dimensions of students' meaningful experiences in PE.

Towards an embodied pedagogical principle

Adding an embodied pedagogical principle to the Meaningful PE approach raises questions about what it should involve, what it might look like, and how it may relate to the democratic and reflective pedagogical principles.

In their review of pedagogies of embodiment in PE, Aartun et al. (2022) emphasize the importance of an embodied pedagogical approach that addresses students' pre-reflective bodily engagement, reflective interpretation and evaluation of their bodily experiences, and the discursive influence of language, cultural, and social norms to support students' meaningful experiences. In the present analysis, we do not address reflective or discursive dimensions but rather focus on what Merleau-Ponty (2012) refers to as the body schema, which is our fundamental structure of perception. However, as Young (1980) has illustrated, societal norms and discursive influences can shape our bodily engagement, colouring even our pre-reflective bodily experiences with culturally embedded attitudes and expectations. This suggests that reflective and discursive dimensions inevitably influence students' experiences in movement. Therefore, pedagogy should encompass our being, reflection, and critical consideration of ways of being a body (Brinkmann, 2018) – an idea also emphasized by Arnold (1979) through his concepts of meaning in, about and through movement in PE. However, with this paper, we only address the pre-reflective dimensions to inform an embodied pedagogical principle.

Possible implications of the pre-reflective dimension

Several scholars have addressed pedagogies of embodiment in relation to PE (see, e.g. Arnold, 1979; Standal, 2015). Embodied pedagogy is, therefore, not new to the PE literature. We aim to bring these studies into dialogue with the Meaningful PE approach with help from our analysis above of bodily and pre-reflective dimensions of the five features of the Meaningful PE approach, to inform an embodied pedagogical principle to support students' meaningful experiences in PE.

A useful starting point may be Klaus Prange's (2012) phenomenological analysis of the general structures of the pedagogical practice. According to Prange, teaching involves directing students' attention to help them form a relationship with the educational theme. This involves the teacher presenting the theme to the students in a way that invites and opens them up to it (Prange, 2012). In this sense, teaching to support PE students' meaningful experiences on a pre-reflective level may be a matter of (re)directing their attention to reveal new meaning within the educational theme(s) of PE.

Furthermore, Prange (2012) argues that teaching is a matter of showing, which manifests itself, among other things, in the bodily form of pointing. The gesture demonstrates a double movement as pointing shows something to someone and, at the same time, it shows the one who is pointing,

which gives the gesture and theme significance. The double movement of the pointing gesture emphasizes the direct role of the PE teachers' affective gesture in relation to students' experiences of the theme. In this sense, teaching to support PE students' meaningful experiences on a pre-reflective level may also be a matter of affective pointing, seeking to encourage students to come into a relationship with the educational theme (Prange, 2012). For example, Lund (2017) showed how pedagogues' bodily dramatic expressions in play activities aroused children's participation, where the bodily dramatization (e.g. the pedagogue's dramatic gazes, voices and movements) can be understood as an affective pointing gesture that directs children's attention and gives the play activity a significance.

The negative dimension of experience (Gadamer, 2004) highlights an interruptive quality of an embodied pedagogy as PE students will experience resistance and real limits to their bodily encounters in PE. This emphasizes that we must *not* deprive PE students of moments of bodily resistance, interruption, and discontinuity (English, 2014; Quennerstedt, 2019) and thus avoid easy street pedagogies with a one-sided focus on pleasure and fun (Kretchmar, 2006a). Following Kretchmar, PE teachers must point towards challenges, obstacles or activities that defy the students to solve their riddles and yet invite them to try (Kretchmar, 1975: 24). A recent study by Askildsen et al. (2024) has shown how PE teachers appealing to students' active engagement, rather than demonstrating the solution, supported their discontinuous experiences and nurtured their continued practising.

Considering these insights can be a useful starting point to inform the addition of an embodied pedagogical principle to the Meaningful PE approach.

Relation to the democratic and reflective pedagogical principles

Drawing on Merleau-Ponty's (2012) double concept of our bodily nature as both lived (Leib) and physical (Körper), our body is both a medium for perception and a foundation for self-relation and relation to others (Brinkmann, 2018). Our lived body is the starting point of all orientation; however, it is only through reflective distancing we can relate to our body and the relations we live in with others. Thus, our lived body serves as a foundation for reflective and critical engagement with the world. It is thus the relation between being a lived body and having a body that creates the potential for self-relation and relation to others. Embodiment is therefore a mode of entanglement of the lived and the physical, whose pre-objective silent experience can only truly be understood retrospectively (Brinkmann, 2018). This emphasizes the relevance of addressing both pre-reflective and reflective dimensions of meaning in an approach to students' meaningful experiences in PE. Thus, we advocate for the addition of an embodied pedagogical principle to the Meaningful PE approach, not in opposition to the reflective and democratic principles, but rather alongside them.

It is beyond the scope of the present paper to discuss an embodied pedagogy in more detail. We envision that further studies can explore and expand on the potential implications that an embodied pedagogy may have for supporting students' meaningful experiences in PE and that this can provide teachers with new pedagogical possibilities in working with Meaningful PE in practice.

Concluding remarks

Drawing on a phenomenological concept of embodiment, we have examined the pre-reflective, relational and active-passive dimensions of the five features of students' meaningful experiences in PE.

In the analysis, we have argued that students' meaningful experiences on a pre-reflective level can be affected directly by other students' and teachers' affective participation in body-to-body encounters of social interaction. Furthermore, the analysis indicates that the meaningful experience of challenges is related to the students' openness and embracing of the uncertainty of challenges. On the feature of motor competence, the analysis reveals that expanding PE students' arrays of 'I-cans' can be meaningful in itself. With the feature of fun, we have proposed that the concept of joy can guide ways of promoting excitement, delight and fun in PE, and our analysis indicates that to experience the joy of movement, PE students must be open to and engage with how the world affects them. Finally, aligning teaching to meet the current movement horizon of students was analysed as a bodily way of providing students with personally relevant learning.

Based on the phenomenological analysis, we propose that teaching to support students' meaningful experiences in PE must address the dialectical interplay between reflective and pre-reflective bodily dimensions of experiences. We, therefore, argue for also incorporating pedagogies that consider the pre-reflective dimensions of experience into the Meaningful PE approach. The further development of an embodied account of meaningful experiences in PE can inform new pedagogical approaches and extend the pedagogical principles of the Meaningful PE approach to include pre-reflective bodily dimensions of experience as part of the pedagogical practice of PE.

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Note

1. In his phenomenological investigation, Martin Heidegger (1962: 172) differentiates between the ontological examination of general mode of experience and the ontic study of particular modes of experience. The key distinction is between (a) the ontological investigation of experience as such and (b) the ontic investigation of meaningful experiences in the context of PE. The former is ontological, while the latter is ontic. For this article, the former provides a framework for the latter (Køster and Fernandez, 2021).

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