

Exploring pedagogies of embodiment in physical education teacher education

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ABSTRACT

Background: Various forms of social scientific approaches to the body, utilising concepts such as embodiment, embodied identity, and subjectivity have garnered increasing attention in physical education and physical education teacher education (PETE). On this backdrop, pedagogies of embodiment have been researched as an exciting, new topic in physical education. Nevertheless, little research on the topic has been carried out in PETE.

Purpose: The purpose of this project was to explore how PETE students experience learning new movements and to discuss the implications of these experiences for pedagogies of embodiment in PETE.

Theoretical perspective: The study is framed with the help of Richard Shusterman's philosophy of somaesthetics [Shusterman, R. 2012. *Thinking Through the Body: Essays in Somaesthetics*. Cambridge University Press.]. More specifically, we have been interested in the aspect of his theory that concerns the cultivation of embodied awareness during the learning of new movement activities, in particular the concepts of *pragmatic somaesthetics* and *feeling better* are helpful.

Methods: we have followed a group of five students who were doing their first semester of physical education as a part of their general teacher education. We have generated and analyzed three different kinds of data from the students: (i) a written story about 'a good physical education lesson', (ii) a logbook from a project about alternative movement activities, and (iii) individual interviews. The data have been analyzed following the guidelines for ad-hoc meaning generation [Kvale, S., and S. Brinkmann. 2009. *Det kvalitative forskningsintervju* [The qualitative research interview]. Gyldendal akademisk.].

Findings: A central analytical point in this paper is connection between the experiences that the students brought with them from their own histories in physical education and the experiences they had during the project where they explored a new movement activity. We have explored how this connection is expressed through emotion-words like enjoyment, fun, mastering, and more negatively loaded notions such as embarrassment and fear. We also find that the students' express little explicit concern about learning. Rather than talking about their experiences of practising a new movement activity in terms of learning, the students mainly applied a language of mastering, which was more

ARTICLE HISTORY

Received 3 May 2023

Accepted 13 September 2023

KEYWORDS

Embodiment; pedagogy; physical education; teacher education

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about having a sense of accomplishment, of being able to do something that they didn't believe they were able to do.

Conclusion: Based on our analysis, we argue that the ability to notice, pay attention to and language one's own experiences of moving is a form of embodied reflexivity, which must be considered as integral to pedagogies of embodiment. As such, an aspect of pedagogies of embodiment in PETE would be the development of empathy that enable future physical education teachers to become aware of and be in tune with bodily experiences of their pupils as well as themselves.

Various forms of social scientific approaches to the body, utilising concepts such as embodiment, embodied identity, and subjectivity, have garnered increasing attention in physical education (e.g. Evans 2004; Fisette 2011; Oliver and Kirk 2016) and physical education teacher education (PETE; e.g. Block et al. 2021; Fletcher and Hordvik 2022). Drawing on this range of theoretical perspectives, Oliver and Kirk (2016) noted that pedagogies of embodiment are 'key to the development of transformative forms of PE' (310). Specifically, transformative physical education represents a critique of a curriculum focusing on playing a narrow selection of team-based sports technique training of de-contextualised skills, and reproducing hegemonic masculinity (see Kirk 2010). Kretchmar (2006) described traditional approaches to physical education as an 'easy street' in which pupils are introduced to a selection of activities informed by the health benefits of physical activity and, apart from that, kept 'busy, happy and good' (350). What Oliver and Kirk (2015; 2016), along with other researchers (e.g. Oliver and Lalik 2001; Walseth, Engebretsen, and Elvebakk 2018), called for is a move towards pedagogies empowering students and fostering critical consciousness and agency. Attending to students' and pupils' embodied experiences and learning plays a significant role in this transformational work.

In a literature review on pedagogies of embodiment, Aartun et al. (2022) identified two lines of empirical research: pedagogies enabling critical reflection and pedagogies exploring (new) movements. For the first approach, the research literature emphasised critical 'pedagogies that can challenge 'taken-for-granted' understandings of gender, health, and body ideals in physical education' (4). The second approach, explored further in this paper, challenges traditional forms of movement learning and education by developing teaching methodologies helping learners experience, notice, and language one's own embodied experiences to develop movement capabilities (e.g. Aggerholm et al. 2018; Bergentoft 2018; Nyberg 2014; Nyberg and Carlgren 2015). Another line of research explores how experiences of enjoyment and meaningfulness relate to movement learning and valuing physical activity (e.g. Lambert 2020; O'Connor 2019). Aartun et al.'s (2022) review also found that some of the literature suggested that exploring new movements helps develop trust in a group, leads to more democratic forms of participation in physical education, and challenges stereotypical notions of movement cultures.

Aartun et al.'s (2022) literature review concerned physical education and did not include research in a PETE setting. Hegna and Ørbæk (2021) summarised empirical research on embodied learning and teaching in higher education in a study that included but was not limited to PETE. They found that the existing research mainly emphasised two categories of embodiment: cognitive aspects of embodiment, which involves the cognitive awareness of bodily experiences, and discursive aspect of embodiment, which considers how bodies are perceived and expressed in a community. Accordingly, they called for research on embodiment and learning in higher education that considers the sensory, intersubjective aspects of embodiment.

A line of research on embodied learning and embodiment has explored how PETE can be conceptualised differently from the more traditional, dualistic conception of the body in movement. Block et al. (2021) suggested a 'thirdspace movement concept' to highlight how PETE could become more attuned to students' embodied experiences while simultaneously promoting social justice and

equity: ‘The Thirdspace is a psychological space where students can experience their own bodies, their relationships with others, and physical activity free from judgement, discrimination, and injustice’ (337). Similarly, Lambert (2020) advocated reconceptualising physical education and PETE by asking what embodied physical education and PETE could be like. Drawing on the work of P. J. Arnold, Lambert articulated the core of physical education and PETE as ‘thinking “in” movement (mind); intention “in” movement (body); sensing “in” movement (pleasure); [and] sharing “in” movement (other)’ (162).

Nyberg, Backman, and Larsson (2020) explored the meaning of movement capability for PETE students. The researchers framed activities such as dance, aquatics, and ice skating as movement capabilities rather than as traditional sports in that they were interested in what it means to know dance, for instance, rather than performance of dance. Thus, the researchers analysed the students’ experiences with these activities. They found four qualitatively different ways of experiencing movement capability: moving to achieve certain purposes, iterating movements, experiencing various degrees of difference and aspects of moving and sensing one’s movement.

Thus, exploring movements as part of PETE has begun to be investigated conceptually (Block et al. 2021; Lambert 2020) and empirically (Nyberg, Backman, and Larsson 2020). However, while some research on pedagogies of embodiment is available in the physical education setting, there is a need for more research on pedagogies of embodiment PETE. This project, therefore, aimed to determine how PETE students experience learning new movements and to discuss the implications of these experiences for pedagogies of embodiment in PETE.

Theoretical perspective

We framed this study with the help of Richard Shusterman’s philosophy of somaesthetics, which concerns ‘the body as a locus of sensory – aesthetic appreciation (aesthesis) and creative self-fashioning’ (Shusterman 2012, 27). Shusterman’s work has garnered interest among physical education researchers for its theoretical value in understanding movement capability and the development of practical knowledge (e.g. Nyberg 2014; 2015; Standal 2015; Standal and Bratten 2021). This study focused on the aspect of his theory concerning cultivating embodied awareness when learning new movement activities. More specifically, it addressed two concepts from Shusterman’s rich vein: *pragmatic somaesthetics* and *feeling better*.

Shusterman distinguished between three branches of somaesthetics: analytical, pragmatic, and practical. The former concerns theoretical and philosophical studies of the body, ranging from anatomy and physiology to sociocultural studies of discourses about the body. Practical somaesthetics entails engagement in specific programmes aimed at bodily and experiential self-improvement. Finally, pragmatic somaesthetics is the study of somatic methods for improving ‘the experience and use of our bodies’ (Shusterman 2006, 14). Shusterman provided an encompassing overview of these methods and included practices such as body modification (e.g. tattooing, dieting, and body building), yoga, the Feldenkrais method, and skill development in sports. This study emphasised the performative aspect of pragmatic somaesthetics, a category focusing ‘primarily on building strength, health, or skill, disciplines such as weightlifting, athletics, and martial arts’ (16). Within this category, Shusterman further distinguishes between practices aimed at external appearance, such as the display of strength or skills, and practices aimed at inner experience. The latter concerns the notion of feeling better. The ambiguity of the notion is intentional because it covers both becoming acutely aware of one’s inner experience of movement and heightening one’s satisfaction with being in motion.

Methods and materials

This study involved following a group of students in their first semester of physical education as part of their general teacher education (GTE). The dual meaning of feeling better guided the

practical implementation of a project exploring alternative movement activity as part of PETE (see below) and the analysis and discussion of the empirical material we generated.

Participants, research context, and material

The study participants were enrolled in a five-year GTE programme. In Norway, GTE is a five-year programme in which students specialise towards years 1–7 (i.e. pupils aged 6–13) or years 5–10 (i.e. pupils aged 10–15). They also choose one main teaching subject (Norwegian, English, or mathematics). They then take one or two more teaching subjects, with physical education as an option. Those students who choose to study physical education can do so for either one semester (30 credits) or make it their specialisation, leading to a master's degree in PE.

This study was conducted during the participants' fifth semester (year three), the first semester they studied physical education. All students in the class ($N = 34$) were invited to participate in the study. While 10 students voluntarily agreed to join the project, five did not complete the first or the second data generation activity. We chose to interview only the five who had completed both activities and included them in our analysis. The participants comprised three female students (Sandra, Tina, and Anna) and two male students (Johnny and Emil), all in their early twenties. They had different childhood movement backgrounds involving various organised and self-organised sports, and they were regularly active.

We generated and analysed three types of data from the students: (i) a written story about a good physical education lesson, (ii) a logbook from a project about alternative movement activities, and (iii) individual interviews.

The first data source was generated as a part of the initial meeting between the students and their programme's faculty. The story's purpose was familiarising the students' preconceived ideas about physical education. Specifically, each student was prompted to write a short description of a good physical education lesson.

The second data source was a digital logbook generated over six weeks, in which students practised one self-selected alternative movement activity. Alternative movement activities are sometimes referred to as lifestyle sports (Wheaton 2004) or post-sports (Atkinson 2010), activities not necessarily related to organised sports and characterised by cooperation rather than competition, inclusion rather than hierarchy, and physical expression rather than performance. Examples of such activities include skateboarding, scooting, and yoga. As alternatives to traditional sports, these activities have held a prominent position in the Norwegian physical education curricula over the last decade. Thus, this topic is integral to their education.

During the six weeks of the study, the participants could explore an activity they had limited experience with. They were provided lectures on alternative movement activities, but most of the study time was dedicated to independently exploring their chosen activities. The lectures concerned what alternative movement activities are and what status such activities held in the curriculum. Due to COVID-19 restrictions, the lectures were held online. COVID-19 also restricted the activity organisers: While they could hold practices with smaller groups outside, they could only hold them indoors with individuals. The students were encouraged to find learning resources (e.g. instructional videos on YouTube) for practising with other students and to use videos of their practices. The students also kept a logbook to document and otherwise support their learning process. They were given prompts, such as how they used video, whether they preferred practising alone or in a group, and questions about movement concerning their inner experiences, emotions, and kinaesthetic experiences (Shusterman 2012).

The final data source included five individual semi-structured interviews with each student. The first and second authors conducted these interviews after the semester had ended. The interview guide addressed themes, including the students' own experiences with physical education and movement activities, the six-week practice period, and their perception of themselves as future

physical education teachers. As with the prompts for the logbook, we continued to inquire into notions such as feeling better, the inner experience of movements, and other theoretically informed topics. The interviews were audio recorded and transcribed verbatim. In the final analysis step, the writing process, interpretations and direct quotes were translated into English. While translation presented few problems, some words and phrases were challenging. Therefore, when presenting the results, the challenges are commented with references to the Norwegian terms originally used in the interviews.

Analysis

The data were analysed following the guidelines for ad-hoc meaning generation (Kvale and Brinkmann 2009). More specifically, the process was guided by the following analytical questions: (i) What were the students' experiences with and preconceived ideas of teaching PE, (ii) how did the students experience working with pedagogies of embodiment through the PETE programme, and (iii) what were the implications of these experiences for pedagogies of embodiment in PETE? While using analytical questions to drive analysis is primarily deductive, exploring experiences also required bracketing our pre-understanding of the considered topics. Although the first and second authors had perused and familiarised themselves with the data as they were collected, the main part of the analysis began after the interviews. Following Kvale and Brinkmann (2009), the first step in the analysis was a collaboration between the first and second authors that involved meeting regularly to discuss their interpretations of the data. This process involved individually highlighting episodes, statements, and extended excerpts from the material, which we subsequently discussed in meetings. It allowed us to jointly develop, refine, and name the themes comprising this paper's results. The third author contributed to the final analysis by critically questioning it, thus adding nuance.

Ethical considerations

The project was guided by Norwegian Social Science Data Services requirements and the university's requirements for research ethics and the storage of sensitive data. The students were unequivocally told that participation in the research project was voluntary. We anonymised the participants in the written report. While we acknowledge the challenges of the dual roles of researching and teaching in the programme, we want to note that the first author, who led the data generation activities, had no other teaching or assessing role in the educational programme. We also ensured that the written story and logbook were securely stored and not opened for research before the semester had ended and the students had received their final grades.

Results

In this section, we present the analysis based on the analytical questions concerning the students' relationship with physical education and their experiences with a new movement activity. The third analytical question is reflected on in the discussion.

The students' relationship with physical education

When we analysed the students' descriptions of what they considered a good physical education lesson at the beginning of their physical education programme, certain characteristics emerged. Some of these characteristics are frequently addressed in the research literature (e.g. Larsson, Linnér, and Schenker 2018; Mordal-Moen and Green 2014), such as an emphasis on class management (for instance, Emil noting that 'all pupils should know what they are expected to do at all times') and

a focus on pupils' activity levels and engagement during class (for instance, Sandra responding with 'My pupils are engaged in the activities'). However, we also found that the students were already concerned with inclusiveness at the outset of their physical education studies. For instance, Anna stated that 'All pupils should have the opportunity to experience the joy of movement', and Sandra asserted that 'The teacher should see all pupils and make sure that the lesson is a positive experience for all, both those who have physical education as their favourite subject and those who prefer to read books'.

Emotion words, such as 'fun', 'enjoyment', 'motivation', and 'mastering',¹ were used to describe experiences that the students wanted pupils to have in physical education, as exemplified by Sandra, who stated in her description of a good lesson that 'the activities [I plan for] create joy and engagement'. Perhaps unsurprisingly, such emotion words are also used to describe their experiences as physical education pupils. They found physical education enjoyable and their favourite subject. Johnny, for instance, recalled, 'I always thought physical education was fun ... a subject where you could move and be a little more practical, in a way. So, for me, who has always been doing sports, it was very enjoyable'.

While the students had similar joyful relationships with physical education, there were also some differences in their experiences and beliefs about how it should be practiced. Such sentiments were expressed in both the stories and the interviews. Most students described their experience with physical education as almost like caricatures. Their physical education centred on sports, especially ball games. It also stressed competition, and fitness testing played a prominent role:

I remember that we played lots of ball games ... but never with much focus on learning. But I still had very positive experiences because I liked physical education and the competitions. I really thought the ball games were fun. I didn't think too much about it – it was the way it was, and that was good (Tina, interview).

In a similar vein, Sandra told us that she felt 'that we had the standard activities: ball games, some endurance running ... [It was] very traditional, with fitness testing'. Nevertheless, some students also recounted experiences of awkwardness, fear, and embarrassment in physical education: 'I remember that dancing was the most unpleasant activity, because we were forced to be boy/girl, and I remember that was unpleasant, at least in secondary school' (Tina, interview). Notions of fear in relation to physical education also arose in interviews, such as when Emil recalled that physical education, while mostly a positive experience, 'also evoked fear in me, especially when it came to the 3,000-metre run and gymnastic exercises'.

Exploration of a new movement activity

A central analytical aim of this paper was to connect the experiences that the students brought with them from their own histories in physical education with those that they had during the project, where they explored a new movement activity. Our assumption was that who the students were and what they had experienced prior to entering PETE influenced what they could learn about pedagogies of embodiment. One of the participants, who related his exploration of parkour to childhood memories, expressed this connection:

We used equipment and the terrain in a completely different manner, so it was almost like going back to ... I got flashbacks to when I was a kid and was in a climbing frame or when I ran around climbing trees and stuff like that, which were fun, stuff that I don't do any more ... So [parkour] was, in a way, a return to that (Sandra, interview).

One of the topics raised in our analysis was the students' experiences of enjoyment and fear when practising a new movement activity. Fear manifested in two ways. First, it was the fear of getting physically hurt, as Sandra indicated: 'As I have become older, I take less risks in activities that I earlier would just throw myself into ... now in jumping between things where there is a danger of stumbling and stuff, so that has stopped me doing things' (interview). Similarly, Emil explained,

'I have felt fear to do movements that are technically demanding and where there is a risk of getting hurt'.

Second, fear was, to an extent, socially manifested in that practising in a social setting made some of the students anxious. Thus, they preferred to try activities alone before performing them in a group. As Tina wrote, 'If I feel insecure about something, then I find that it is best to practise alone because it is unpleasant to make mistakes' (logbook). However, the students found the social setting mostly positive. Emil reflected, 'Doing parkour with a group, in a community, made me feel good. It was fun' (logbook). In other words, while a social setting could heighten a student's fear of being exposed by making what they perceive to be mistakes, it resulted in positive experiences.

As previously mentioned, emotion words, or expressions of affect, were found in all data and among all students. These experiences were often related to mastery, or the ability to perform a task with some success. As Johnny stated, 'If you feel that you master something, then it is easier to do it than if you are incapable. Then you dread it' (interview). Similarly, other students expressed an either/or understanding of mastery: 'If there is something I don't master, then I quickly lose faith, but if I do master it, then I want to do more of it'. While we found that the students were concerned about mastery, we also observed that learning, either as a tangible improvement in their movement explorations or an experience they could express or even talk about, was less present in the data. An example of this was in the interview with Tina. She spoke about how she sees a good physical education lesson as fun and 'educational' (translation note: the original word used by Tina is *lærerik*, which means rich in learning). The interviewer then asked, 'Educational (*lærerik*) Can you tell me more about what you mean by that?' Tina replied, 'Ehh ... That you go out of the lesson and feel that you have mastered something that you perhaps didn't think you were able to do'.

Similarly, Anna included a link to a video as a part of her logbook, in which she 'shows what I have learnt, and how I have progressed in learning the "ollie". I wouldn't say that I master the trick, but I master [it enough] to enjoy myself on the board'. In both cases, the language of learning is substituted with mastering, which, as noted above, implies a sense of accomplishment.

The topic of learning was connected to videos that the students made: 'We have already used some video in the form of making TikTok videos that we have analysed several times and looked at details on our [parkour] technique' (Emil, logbook). In the interview, Emil explored this further by saying that making the videos was

motivating because we could see what we were able to do, but also because we could see what we did, which elements a movement consisted of ... where to put the feet. And we could go through it several times to see what we could improve to make it better.

Sandra expressed another emotional response to movement that arose from a video: 'We tried to make videos of each other, and it was often of [tricks] that looked cool, but when I saw them afterwards, they didn't look cool at all'. In other words, using video could also cause estrangement. It is not dissimilar to Tina explaining how she withdrew from practising in a group when she felt that she had not mastered the tricks they were practising and would be seen in a situation that she experienced as uncool.

Discussion

In presenting our analysis results, we highlighted that students' preconceived ideas about 'good physical education', their own experiences with physical education as pupils, and their experiences practising a new movement activity were expressed through emotion words, such as enjoyment, mastering, and, to an extent, fear and embarrassment. We also noted a relative lack of explicit attention to learning. Rather than discussing their experiences practising a new movement activity in terms of learning, progression, development, or a similar context, the students primarily applied the language of mastering. For them, mastering concerned a sense of accomplishment or the ability

to achieve what they did not believe they could. This finding is comparable to that of Nyberg, Backman, and Larsson (2020), who conceptualised mastering as being able to achieve a certain purpose.

We interpreted our study participants' expressions of mastering as speaking into a discourse that rests on the connection between the feeling of being able to perform a given task and the motivation or interest to do that task again. Feelings of mastering can be seen as an outcome of learning and a driver in the learning process. Claiming that the students were disinterested in learning would therefore be an exaggeration. Instead, we found that the students were more concerned with feeling good than with tangible improvements in movement capability.

One might argue that this concern with enjoyment and feeling good is the outcome of the theoretical perspective we applied, which emphasises the dual meaning of *feeling better* (Shusterman 2012). However, the students expressed their concern for emotional experiences on the first day of the semester when they wrote stories about a good physical education lesson. Thus, the students brought affects and emotion words to PETE. These feelings, affects, and kinaesthetic experiences can potentially be turned into something they can learn about. In that sense, the concern for feelings of mastery allows for learning about oneself as a future physical education teacher.

In our study, the purpose of mastering appeared to be more connected with accomplishment than with, for instance, tangible progression in skill development. We found that the students were more preoccupied with enjoying being in motion. On one level, this finding aligns with the research literature on physical education. In Norway, Scandinavia, and internationally, the lack of attention given to learning in physical education has been problematised (e.g. Kirk 2010; Larsson and Karlefors 2015; Standal, Moen, and Westlie 2020). We could also interpret the prioritisation of feeling good over learning as an easy street approach (Kretchmar 2006) to physical education, in which the subject's main purpose is to keep students 'busy, happy and good' rather than to allow them to learn and develop. However, a more benign interpretation of the students' priority of feeling good over learning relates to their emphasis on inclusiveness.

Over the past several years, researchers have criticised the dominance of performance-related technique training and the playing of competitive sports in physical education for favouring those already active in competitive sports to the exclusion of others, for example, pupils with disabilities (Fitzgerald 2005; Svendby and Dowling 2013) or other pupils whose abilities are not usually recognised in physical education (e.g. Evans 2004; Hay and Hunter 2006). Notably, despite having experienced physical education focusing on team sports and fitness testing, the study participants already held inclusive values at the outset of their PETE. One explanation is that the students were exposed to these values in the first years of their GTE, for instance, by studying pedagogy and general didactics. Another benign interpretation is that learning occurs in more theoretical or 'serious' subjects and that physical education's primary purpose is feeling better in Shusterman's dual sense. The feeling of mastering, then, is not so much a replacement for learning as an alternative reality; it is a different way of understanding physical education's objective.

As mentioned above, the students did not use only positively loaded emotion words. When recalling their experiences in physical education and reflecting on the process of practising a new movement activity, they raised notions of fear and embarrassment: a fear of being physically hurt and a fear of the social awkwardness of (perceived) failure in front of others. On this topic, Rustad and Langnes (2019) found that dance in PETE was described using 'joy' and other positive emotion words and negative emotion words, such as 'nervousness' and 'anxiety'. The authors asserted that student teachers had to experience emotional situations to gain 'insight into the possible emotions of pupils and how emotions could influence learning situations' (56). Similarly, Lambert et al. (2022) observed that the affective experiences of feeling, sensing, and paying attention are integral to embodiment in physical education. Having such experiences in the context of physical education teacher education may be valuable, but these experiences must be put into language, reflected upon, and framed as essential for professional development. Therefore, learning about one's emotional experiences should be integral to pedagogies of embodiment in PETE.

The present study is exploratory. Only five out of 34 students agreed to participate and completed all the data collection methods (i.e. the story, the logbook as well as the interview). We believe that the low number of student volunteers could, to an extent, be explained by the COVID-19 situation in which we, as faculty members, initially only had contact with students via Zoom. However, five participants were sufficient for an exploratory study. The COVID-19 restrictions hindered our following the students' practising, and closer observations could have allowed for further insight into their experiences. It would also have been easier for the faculty in charge of the teaching to intervene.

Nevertheless, in considering the third analytical question, the present study contributes to how pedagogies of embodiment can be understood in a PETE context. We have drawn on previous work by Aartun et al. (2022), who distinguished between two forms of pedagogies of embodiment: enabling critical reflection on issues connected to the body and exploring (new) movements. The latter, which we have worked with, concerns developing body awareness, motor competence, and the capability to move. In this regard, we have drawn on Shusterman's somaesthetics theory, which considers the body 'as a locus of sensory – aesthetic appreciation (aesthesis) and creative self-fashioning' (Shusterman 2012, 27). More specifically, his notion of feeling better can help address the disconnect between the students' lack of explicit attention to learning and their preoccupation with emotional experiences.

On the one hand, feeling better means enjoying better feelings (e.g. fun and delight), and on the other hand, it involves more accurately perceiving what people experience in their bodies when moving. Lambert (2020) also found a connection among pleasurable experiences, meaningfulness, and the educative potential of physical education. Notably, she indicated that pleasurable embodied moments in movement could be a precursor or pre-text to learning. Pedagogies of embodiment in PETE could, therefore, involve increasing accurate perceptions and applying language to those feelings, emotions, and affects that the students experienced. Thus, Lambert claimed that by 'paying more attention to embodied learning and learner embodiment we are better able to think differently about more sensuous ways to set up, activate and stimulate learning in [the] PE/PETE classroom' (170).

Taking Lambert's claim further, or, in other words, moving beyond pre-text for movement, pedagogies of embodiment in PETE could also involve students achieving certain aims with movements, iterating movements, experiencing varying degrees of different movements, and sensing one's movement (Nyberg, Backman, and Larsson 2020). Nyberg et al. explained that these categories presented a nuanced 'picture of what movement capability can mean for students as well as teacher educators ... [and] facilitate verbalisation of different specific goals regarding teaching and learning movement activities' (157). An important finding of this study is that such verbalisation is not tantamount to the increased abstraction and turning movement competence into a theoretical study. Considering Shusterman's somaesthetics, the ability to notice, pay attention to, and describe moving experiences linguistically is a form of embodied reflexivity that must be considered integral to pedagogies of embodiment.

This can be achieved in different ways in PETE. First, the choice of movement activities is crucial. In addition, *how* activities are presented to students is vital, as Nyberg, Backman, and Larsson (2020) and Lambert (2020) claimed. This study exemplifies this combination. Working with untested activities could have helped to take them out of their comfort zone and into a movement landscape where they could more easily connect to kinaesthetic experiences, feelings, and affects. As previously noted, these movement experiences must be thematised in the educational programme. They must be considered as sources of knowledge about movements that are just as valuable as knowledge about heart rates and energy expenditure.

Embodied self-knowledge does not automatically occur when engaging in movement activities and practices. For Shusterman (2019), the experiences gained from being and learning in movement must be brought to reflective attentiveness *and* worked with or on. In doing so, people would educate their bodily senses. Shusterman noted, 'Education is not so much a matter of

working on particular emotions or movements, but of reorganising or retraining habits of feeling and movement and habits of conduct to which feeling and movement contribute' (57). An important implication of this quote relates to the experiences of fear that some students described. These fears centred on not mastering movements in social setting. According to Shusterman, the role of PETE faculty is neither to help students avoid such uncomfortable situations nor to comfort students if or when they experience these fears. Rather, pedagogies of embodiment involve development of empathy, which enables future physical education teachers to be attuned to their pupils' bodily experiences. This focus on intersubjective bodily experiences merits further studies in PETE.

Note

1. The notion of mastering or mastery is one of the instances that created challenges in translation from Norwegian to English. While the word mastery in English refers to 'demonstrating or involving great skill or power' or 'superiority or ascendancy in battle or competition' (Oxford English Dictionary), the Norwegian word *mestring* connotes a sense of accomplishment and not necessarily any kind of high level or superiority. Nyberg and colleagues (2020) also use the word mastering in the latter sense as that 'discerning and changing detailed ways of moving, can provide a comfortable feeling of confidence' (151). As such, the way we use the term mastering here, it is more an emotion word than a high-level physical performance. Indeed, this is an analytical point that we will elaborate on later.

Disclosure statement

No potential conflict of interest was reported by the author(s).

Funding

This research was funded by the Norwegian Research Council under grant number 301598.

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