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INDETERMINATION IN CREATIVE DANCE



Indetermination in creative dance

On creative dance teaching in physical education teacher education

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Abstract

The overall aim of this thesis is to explore how creative dance in Swedish physical education teacher education (PETE) can be taught and experienced. PETE holds a responsibility to extend preservice teachers' movement repertoires and plays a crucial role to provide opportunities for the future physical education (PE) teachers to gain experience and knowledge of dance teaching. Creative dance is part of the teaching area of dance in PE and often a new experience for students when entering PETE programs. The research literature is scarce, in a Scandinavian context as well as internationally, about creative dance teaching in PETE.

This doctoral project, guided by Deleuzian scholarship, includes three studies, a literature review, an interview study and a pedagogical intervention study. These three studies resulted in one article in the form of an unpublished manuscript and three published articles. The first article, the manuscript, explores how theoretical approaches are used in studies of creative dance teaching in PE and PETE. The second article explores how PE teacher educators describe their teaching of creative aspects of dance in PETE. The third article explores what PETE students express and experience when participating in mirror assignments during creative dance lessons and what insights can be made regarding creative dance teaching. The fourth article explores how human and non-human materialities play a part in movement exploration in creative dance in PETE and pedagogical implications in creative dance teaching.

The thesis offers four key insights. The first insight is that PE teacher educators have specific ideas about creative aspects of dance and about teaching creative dance. The second insight is that inspiration from Deleuze's philosophy can support and extend ideas about teaching mirror assignments in creative dance lessons in PETE. The third insight is that teaching mirror assignments in creative dance lessons in PETE can make students' expressions and experiences involve indetermination. The fourth insight is that a post-anthropocentric and Deleuzian approach can be seen to extend notions of creative dance teaching in PETE. My thesis shows various ways how teaching can encourage PETE students to engage with a teaching area that can be unfamiliar to them. The pedagogical insights presented in this thesis can support PE teacher educators and PE teachers when considering teaching creative dance.

Articles

I – Engdahl, C. (unpublished manuscript). Creative dance teaching in physical education and physical education teacher education – a literature review.

II – Engdahl, C., Lundvall, S. & Barker, D. (2021). 'Free but not free-free': teaching creative aspects of dance in physical education teacher education. *Physical Education and Sport Pedagogy*. doi: <https://doi.org/10.1080/17408989.2021.2014435>

III – Engdahl, C., Lundvall, S. & Barker, D. (2022). Dancing as searching with Deleuze – a study of what students in physical education teacher education express and experience in creative dance lessons. *Research in Dance Education*. doi: <https://doi.org/10.1080/14647893.2022.2144195>

IV – Engdahl, C. & Ceder, S. (2023). Exploring Movement in Creative Dance: Introducing 'Dancemontage' in Physical Education Teacher Education. *Journal for Research in Arts and Sports Education*. doi: <https://doi.org/10.23865/jased.v7.5852>

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Prologue

I began teaching dance at The Swedish School of Sport and Health Sciences (GIH) in 2017. Before that I had trained dance and taught dance in arts educations in Sweden and in the UK. Numerous times I had experienced and witnessed how creative dance could be an arena for me and others to create astonishing – and horrible – pieces of art, to connect to a community, and to learn to express ourselves in ways we couldn't predict.

Central to what I had trained and taught was being handed a few instructions or frames and exploring moving my body and bodies of others, acknowledging and affirming bodily sensations, feeling energetic, happy, tired and angry. Sometimes I experienced that I was mastering movements, by experiencing an embodied awareness of from where my movements were initiated and how they affected each other. Sometimes I felt that I was aware of thoughts and emotions that I expressed through movement. At other times, and particularly interesting for my thesis, I experienced that I could not predict where my movements would lead me or what or who was guiding my exploration of movement. In fact, in teaching, I have often worked with exploration and without knowing what directions students would move or what they, or I, would experience. Of course, the notion that we are unable to foresee what will come, do not only concern dance. The extremely fast development of AI and exponential technology and the unforeseen consequences of climate change are also a few other things that might remind us that unpredictability seem to be something that defines our time.

Soon after arriving at GIH, I began to wonder if, and hope that, the mandatory activity of dance in physical education (PE) in Sweden could provide all these things I had experienced and witnessed in creative dance teaching to potentially all children and youth in Sweden. I also began to understand the specific concerns and challenges of teaching dance in this educational context. Quite often I experience how students I meet in physical education teacher education (PETE) are excited, frightened and sometimes overwhelmed by embarking on exploration of movement in the, often, safe learning space of creative dance teaching.

Somewhere here, in the clutter of experiences and curiosity, I began working with my thesis. I wanted to know more about all the complexities of creative dance teaching when it is situated in my specific educational context. To learn more about creative dance teaching in PETE, I went on a journey around Sweden to study how physical education teacher educators describe creative aspects of dance in their teaching, I walked to my own classroom to explore how my students and I might trigger new questions about creative dance teaching guided by philosophy, and I attended seminars, traveled to universities both in Sweden and in foreign countries – as well as rolling my office chair to my own bookshelf – to study creative dance teaching in PETE and what new theoretical approaches might bring to the research field. In dialogue with research literature, in engagement with empirical material, and in a search for theoretical approaches that could guide me through questions of movement and exploration in dance, my questions and curiosity over time formed this PhD project about creative dance teaching in PETE.

1. Introduction

Dance has been a teaching area in physical education (PE) in several countries for a long time (Mattsson and Lundvall 2015; Vertinsky 2009). The teaching area has offered an important movement education of children and continues to do so. Today, dance is included in the PE curriculum in primary education as a mandatory activity in 23 European member states (Konstantinidou 2023) as well as the UK (Payne and Costas 2021). In the United States, dance teaching is included in national standards and is often part of the arts curriculum while some schools offer dance lessons as part of PE (NDEO 2023). Dance is a component of the PE curriculum in Sweden, which provides the geographical context of my thesis. In the current steering documents within PE in Sweden, teaching is expected to allow school pupils to learn different forms of dance and to create movement- and training programs to music, pace and rhythm (The Swedish National Agency for Education 2022a). Still, it is not regulated in the curriculum how dance is supposed to be taught or assessed.

Although dance is included in school curricula, it has been minority area for some time in European countries (Sanderson 2001). In PE lessons, dance has been, and still is, rare and at times entirely absent (Standal et al. 2020; Mattsson 2015; Lundvall and Meckbach 2008). In a Scandinavian context, as well as internationally, PE teachers signal lack of dance experience and can feel uncomfortable incorporating dance in their teaching (Rustad 2017; Bajek et al. 2015; Buck 2006). PE teachers tend to choose other movement practices before dance (Rustad 2013). Notwithstanding PE teachers' lack of experience and confidence, in a Swedish survey every fourth teacher stated that they would like to allocate more time to teaching dance (Lundvall and Meckbach 2008).

Creative dance is part of the teaching area of dance in PE. Creative dance, within and outside of PE and physical education teacher education (PETE), is often characterized by an approach which supports everyone's subjective way of dancing, rather than performing pre-determined steps of dance forms (Mattsson and Larsson 2020; Ørbæk 2018; Gilbert 2015). This part of the teaching area of dance can, for example, allow school pupils to develop their bodily competence (Ravn 2014), or extend their abilities to act (Mattsson 2016). Furthermore, in creative dance in PE, young people are intro-

duced to creative processes (The Swedish National Agency for Education 2022c; Neville and Makopoulou 2021; Payne and Costas 2021; MacLean 2018). Creative processes are central to creative dance teaching, and refers to teaching that rarely prescribes how students should move or act but that suppose movement and actions to be produced through processes of exploration (Larsson and Karlefors 2015).

Within PE in Sweden and internationally, creative and expressive aspects of dance are least prioritized in dance teaching (Adamčák et al. 2023; Mattsson and Lundvall 2015; Baker 2015; Sanderson 1996). If PE teachers – despite their inexperience – are motivated to teach creative dance, they are often left alone to find appropriate teaching methods (Steinberg and Steinberg 2016). Ørbæk (2018) claims that it is up to PE teachers to develop ways of including creative dance in their teaching, often together with colleagues. Here, PETE plays a crucial role in providing opportunities for future PE teachers to gain experience and knowledge of dance teaching (Rustad 2017). Backman et al. (2020) further suggest that PETE has a responsibility to extend preservice teachers' movement repertoires. Thus, it ought to be a concern for PE teacher educators to stimulate PETE students “to move outside their comfort zone” (ibid, p. 122). When entering PETE programs, creative dance is often a new experience for students (see e.g. Ørbæk 2018; Rustad 2017). Students seem to be willing to engage in the learning of movement activities that they are acquainted with, but express a nervousness when encouraged to engage with unfamiliar movement activities (Backman et al. 2020). At the same time, PETE students can experience joy as they participate in creative dance lessons, when creating dance together with their peers. During their PETE program, students meet new ways of dancing and are encouraged to teach creative dance (Ørbæk 2018).

To offer students possibilities to experience situations that are unfamiliar can also be significant for other reasons. In their everyday lives, they are sometimes invited - or forced - to handle unprecedented situations. Only a couple of years ago, who could have anticipated a global pandemic which would in many cases dramatically affect people's lives, organizational structures and ways of teaching? This is a vivid example of how people can become closely affected by unexpected and surprising situations. Unprecedented situations can also be when students meet new peers in class or adjusting to life changes.

Creation and exploration in dance is explicitly referred to in Swedish PETE curricula (Swedish School of Sport and Health Sciences 2022). Though, the research literature is limited when it comes to creative dance teaching in PETE in a Scandinavian and an international context (Engdahl et al. 2022; Ravn 2014; Torrents et al. 2013). The pur-

pose of this thesis is therefore to increase knowledge about how creative dance in PETE is taught and experienced.

1.1. The aim and scope of the thesis

The overall aim of this thesis is to explore how creative dance in Swedish PETE can be taught and experienced. The research design consists of a literature review, an interview study and a pedagogical intervention study. Deleuzian scholarship guides the research process and the following specific research questions (RQs) are addressed in one unpublished manuscript and three published articles:

- I. How are theoretical approaches used in studies of creative dance teaching in PE and PETE? (unpublished manuscript/article 1)
- II. How do Swedish teacher educators describe their teaching of creative aspects of dance in PETE? (article 2)
- III. What do PETE students express and experience when participating in mirror assignments during Swedish creative dance lessons and what insights can be made regarding creative dance teaching? (article 3)
- IV. How do human and non-human materialities co-act in movement exploration in creative dance in Swedish PETE and what are the pedagogical implications in creative dance teaching? (article 4)

1.2. Disposition

The thesis consists of six chapters, one unpublished manuscript and three published articles. It is disposed as follows: in Chapter 2, I outline the specific area of research of creative dance teaching in PE and PETE. In Chapter 3, I present the theoretical approach. The methodological approach resulting in one manuscript and three articles are described and argued for in Chapter 4. In that chapter, I discuss my role as a researcher, ethical considerations and questions of trustworthiness and quality. Summaries of the manuscript and the three articles included in the thesis are presented in Chapter 5. In Chapter 6 follows an elaborated discussion of how the findings of the different studies relate to each other, to previous research and to the theoretical approach, in light of the overall aim. In that chapter, I also discuss limitations of the thesis and suggestions for further research.

2. Background

In this chapter, I will provide an overview of literature in the specific area of creative dance teaching in PE and PETE that is central for my thesis. To make the different aspects of creative dance teaching presented in this thesis more comprehensible, I begin by shortly depicting PE and PETE with a particular focus on how the subject tradition of creative dance has evolved historically. I will also outline PE teachers' and PETE students' experiences of creative dance, current aspects of creative dance teaching in PE and PETE and provide reflections on different aspects of embodied experience in dance in PE and PETE. Research focusing on a Scandinavian educational context, as well as international studies, are referred to in the chapter with the intention to broadly contextualize my thesis.

2.1. A historical outline of creative dance in PE and PETE

In this section, I present a historical outline of creative dance¹ in PE and PETE. As has been stated and will be outlined further here, creative dance is part of the teaching area of dance in PE and is not prioritized in dance teaching in Sweden or internationally. I will describe ways creative dance have become formed and reformed in PE and PETE in relation to the Swedish context in which it is situated. The framing is historically informed, however it does not offer a chronological genealogy.

PE has been compulsory in Swedish schools since the 1800s. The subject can be traced back to 'Swedish gymnastics' developed by P. H. Ling and his followers (Olsson 2007). Swedish gymnastics, also called 'Ling's gymnastics', comprised four elements that can be identified already in Ancient Greece: aesthetic, medical, military and pedagogical (Lindroth 2006). Swedish gymnastics served as a model for school

¹ The earliest mention of the term creative dance in education that I have traced comes from Joan Russell's book *Creative Dance in The Primary School* from 1965. Furthermore, creative dance in a school context was recently delimited as a research field (Ørbæk & Engelsrud 2019).

teaching in Scandinavia and further abroad. This form of gymnastics was supposed to contain simple exercises, involve the whole body, and encourage participation by everyone (Pfister 2003). One description of the aesthetic element of Swedish gymnastics was that it aimed to “express the harmony between the parts of the body” (Bolling and Yttergren 2013, p. 19, my translation). Another description, relevant for this thesis, was that by “aesthetic gymnastics, the human being seeks to make visible her inner spirit: thoughts and emotions” (Ling 1840, p. 78, my translation). Several scholars have described how the rise of organized sports took off in an emphatic way in the early 1900s, and that it challenged the Ling gymnastics system in physical education in many countries (Lundvall 2015; Lundvall and Schantz 2013; Pfister 2003). In Sweden, the sports movement was established when the first sports organization became government financed in 1913. Sport was adopted by PE teacher educators as well as PE teachers in schools in the first decades of the 1900s (Lundvall and Schantz 2013). Sport became included in the bodily movement culture of Swedish PETE and successively an equal part of the PETE training practice as compared to Ling gymnastics. Lundvall and Schantz also point out that the public school system was influenced by “the changing ideals of manliness, where... an appreciation of individual achievement, competitive in character, represented values to be sought after” (ibid, p. 8).

Besides the sportification process in society during the first half of the 1900s there was an ongoing development of dance and movement cultures in Central Europe influenced by an elaborated theory of body and rhythm. This theory included, for instance, the work with expressive or modern forms of dance by Rudolf Laban (Bradley 2019; Fernandes 2015; Buck 2006). These forms of dance were partly a protest against classical ballet, folk dance and other forms of dance based on established steps, movement patterns and terms (Ørbæk and Engelsrud 2019). Inspired by expressive and modern forms of dance, a separate female PETE culture was established in Sweden in the early 1900s (Lundvall 2015a). This culture gradually developed an aesthetic form of gymnastics by focusing on new ideas about the female body and creating space for forms of expressive movement. A similar assimilation of aesthetics into PE and PETE in the early 1900s was also seen internationally (Vertinsky 2009). In the UK, for example, educationalists such as Lisa Ullman and Valerie Preston-Dunlop refined Laban’s principles in the mid-1900s and implemented dance as a teaching area in the PE curriculum (Buck 2006). Sanderson (1996) claims that an “alternative movement approach” (p. 55) was nurtured by the female PE teachers. She also states that the influence of Laban on the movement practices of PE in the UK between the 1940s and 1970s was profound, partly due to the child-centered educational theories popular at the time. The new aesthetic form of gymnastics was a specific form of body movement culture for girls and

women. It aimed at enabling women to learn about and enjoy their physicality, based on what we today would call a subjective experiencing of the body (Vertinsky 2010; Lundvall 2016; Lundvall and Meckbach 2003). Lundvall and Schantz (2013) note that the performing of movements was characterized by “sensitiveness, adaptability, body awareness, and... the feeling of the movement” (p. 9). In line with Ling’s ideas of the aesthetic element of Swedish gymnastics during the 1800s, the aesthetic gymnastics developed by the female PETE culture during the early 1900s embodied values of emotions and how to put one’s soul into the movements, to liberate the body and provide space for self-education (Carli 2004; Laine 1989; Lundvall and Meckbach 2003; Wright 1996).

Parallel to the teaching of an aesthetic form of gymnastics and the sportification process was a political push for equal rights in Sweden during 1970s. This push led to a questioning of the organization of gender-separated school PE classes and PETE programs (Lundvall 2015b). The arrangement of co-educative PE and PETE was seen as part of society’s responsibility to work for equality between men and women (Olofsson 2007). Despite the push for equality, the female aesthetic form of gymnastics became marginalized in the integration of the male and female PETE cultures. Yet parts of the movement education linked to expressive or modern dance culture were kept (Carli 2004; Lundvall and Meckbach 2003; for corresponding changes in other countries, see for example Kirk and Vertinsky 2016; Kirk 2010; Wright 1996). The long and in many ways strong tradition of a female PETE culture together with school PE steering documents, prevented the complete termination of modern and expressive dance ideals and of creative dance (Lundvall 2015a).

Moreover, Mattsson (2015) notes that during the 1960s, in light of societal trends in Sweden such as an optimistic belief in the future and a centralized school system, aspects of playfulness and spontaneity were emphasized in dance in PE and there were spaces provided for non-measurable activities in the subject. In the 1980s, Swedish schooling was decentralized and political changes in society were increasingly directed towards individualization and competition (Mattsson and Lundvall 2015). These changes in society affected the aesthetic discourse in PE. Mattsson and Lundvall note that “competition, measurements and testing... [were]... emphasized at the expense of a widespread alternative explanation of what an aesthetic dimension could contribute to the lives of children and young people” (2015, p. 857). Furthermore, the question of whether dance ought to be located in PE or in the arts curriculum has been debated internationally (see for example, Buck 2006; Sanderson 2001). Sanderson (1996) showed that many dance educators in the UK wanted dance to be safeguarded in the

curriculum, irrespective of its actual location. Teachers claim that it does not matter where or how children gain dance experience, just as long as they get it (Buck 2006).

In the public debate in Sweden and elsewhere, as well as in research, the value and legitimacy of school PE have often concerned the public health discourse, and still do (Sveriges Radio 2023; Nyberg et al. 2021; Larsson and Redelius 2004). For the last couple of decades, the subject has often been described in terms of providing activities for pupils to prevent physical inactivity and obesity or developing knowledge about the relation between physical activity and health. A worry that children and young people are becoming less physically active has influenced ways of reasoning about PE in Sweden. Pupils often regard the purpose of the subject as acquiring skills in different sports and being fitter (Larsson and Redelius 2008).

When examining the pedagogical discourse of dance in Swedish steering documents 1962–2011, Mattsson and Lundvall (2015) identify three different knowledge areas and pedagogical discourses in dance: ‘dance as cultural preserver’ from an identity formation discourse, ‘dance as bodily exercise’ from a public health discourse, and ‘dance as expression’ from an aesthetic discourse. ‘Dance as expression’ can “entail that the pupils are expected to express emotions and moods in the forms of improvisation or dance movements” (Mattsson and Lundvall 2015, p. 59). In the steering documents 1962–2011, the public health discourse has held the strongest position, and the aesthetic discourse the weakest position (Mattsson and Lundvall 2015). These findings add weight to the observations of Larsson and Redelius (2008) and of The Swedish School Inspectorate (2010): that dance is rarely prioritized in PE, and when it is prioritized fitness exercises are common. This has also been observed historically in an international context, for instance in the UK (Sanderson 1996). Gard (2006) claims that dance as part of PE syllabus in the UK becomes “simply another context in which skills are developed and a healthier life is lived” (p. 238).

Moreover, during the last few decades, creative capabilities have become a vital concern in society and in education internationally (Berezki and Kárpáti 2018; Linge 2012). In every curriculum between 1962 and 1994, the Swedish National Agency for Education has expanded expectations of teachers to include creativity² in teaching

² Creativity in education is a broad topic that will not be explored specifically in this thesis. There are various ways to define creativity (Patston, et al. 2021; Kaufman 2016). For instance, creativity can be said to involve representing something different and new, and the usefulness and relevance of creativity is often noted as important to consider. Another determinant identified in creativity research within the field of psychology is the idea of creativity being something unplanned and surprising.

(Sjunner 2009). The 2011 and 2022 Swedish curricula are no exceptions. Regarding school subjects, creativity is not only a concern in aesthetic subjects, but also in other subjects (The Swedish National Agency for Education 2022a). According to the curriculum, teachers shall foster pupils' "development to active, creative, competent and responsible individuals and citizens" (ibid, p. 7). In Swedish PE prior to 2011, aesthetic and improvisatory aspects of movement featured in the curriculum, although they were not realized in teaching (Ekberg 2016). Ørbæk (2018), similar to Ekberg, notes that national expectations and intentions in the Norwegian PE curriculum of creative content in dance teaching were not realized in teaching. Since 2011, there have been no formal requirements of including creative, aesthetic or improvisatory aspects of movement in Swedish PE curriculum (The Swedish National Agency for Education 2022b). However, according to the latest report from The Swedish School Inspectorate (2018), teaching creative aspects of dance in Swedish PE is considered as content to a greater extent than before. This report paints a similar picture to Larsson and Karlefors (2015), who observe that PE teachers teach dance whereby pupils are given opportunities to compose choreography and explore movement qualities. The observations by The Swedish School Inspectorate show that dance has become more integrated in more than a fifth of the movement related lessons, but it is often only taught in parts of a lesson. The report reveals several "good examples with high quality" (ibid, p. 22, my translation) when it comes to teaching creative aspects of dance, where the pupils "ought to be creative and make up a dance" (ibid). Furthermore, as stated, creation and exploration in dance is today explicitly referred to in Swedish PETE curricula (Swedish School of Sport and Health Sciences 2022). Similarly, in Norway, students in PETE are expected to learn to dance, to create dance and to teach dance (Rustad 2017).

To sum up, in this section I have presented a depiction of PE and PETE, with a particular focus on creative dance. I have described how creative dance involves expressive aspects of dance and an emphasis on everyone's subjective way of dancing. I have also presented a historical outline of PE and PETE dating back to the 1800s. I have depicted how creative dance has formed and reformed referring to "Swedish gymnastics", the female PETE culture during the 1900s, societal changes and formal requirements in the Swedish PE curriculum.

2.2. Creative dance teaching in PE and PETE

Given the outline of PE and PETE provided above, and the overall aim of my thesis to explore how creative dance in Swedish PETE can be taught and experienced, I will here depict creative dance teaching in PE and PETE. I begin by offering a description of PE teachers' and PETE students' experiences of creative dance. Then I present current aspects of creative dance teaching in PE and PETE and provide reflections on different aspects of embodied experience in dance in PE and PETE. The studies outlined in this section were particularly relevant when considering creative dance in PE and PETE. Mainly, I refer to studies made in a Scandinavian context and draw on several important international studies to further inform the issues relevant to my thesis.

2.2.1. PE teachers' and PETE students' experiences of creative dance

Ways of teaching, and perceiving teaching, in PE are results of a socialization process (Baker 2015). It is a socialization process that often begins for many young people with sparse childhood encounters with dance combined with multiple positive experiences of sport. The socialization process usually continues during students' PETE training and perpetuates as teacher students begin teaching in schools. PE teachers' often limited experiences with dance in younger years affect the role of dance in teaching (ibid). Given the marginalized role of dance in PE and socialization into PE teaching, many PE teachers lack experience with dance and feel uncomfortable incorporating dance in their teaching (Bajek et al. 2015; Buck 2006), especially creative dance (Steinberg and Steinberg 2016). PE teachers claim that they are insecure about their ability both to dance and to teach dance. It is not uncommon for PE teachers to consider teaching dance as demanding and unpopular with pupils (Adamčák et al. 2023). For some pupils though, dance in PE is something they enjoy (Costas 2011). Rustad (2017) notes that many pupils in fact wish to have more dance in PE, especially girls.

PE teachers' experiences with sport early in their lives influence the confidence to teach sports rather than dance (Bajek et al. 2015). Another aspect that can keep dance out of PE lessons is that because many PE teachers do not associate their teaching with aesthetic dimensions due to its traditionally feminine connotations (Mattsson and Lundvall 2015). Although having stated PE teachers' lack of experience and confidence, they can regard dance as an important part of PE (Rustad 2017). In fact, every fourth teacher in Lundvall and Meckbach's study (2008) stated that they would like to allocate more time to teaching dance. This trend has also been observed internationally

(Steinberg and Steinberg 2016; Mehrhof and Ermler 1992). In the UK, PE teachers are willing to and do not lack confidence in teaching dance. However, in the UK, dance specialists are increasingly considered the norm of dance teaching in PE (Buck 2006). In an American context three decades ago, Mehrhof and Ermler (1992) stated that schools consistently reported dance as an unpopular activity amongst pupils in PE and that the dislike of dance correlated with the lack of exposure to dance education during students' undergraduate preparation. These findings support Rustad's (2017) claim that PETE plays a crucial role to provide opportunities for future PE teachers to gain experience and knowledge of dance teaching.

By being taught dance forms unfamiliar to them, students can expand their concept of dance (Rustad 2012). During their PETE program, students meet new ways of dancing, understanding dance and teaching dance and they also get to experience that pupils can enjoy creative dance in PE. When students get to experience creative dance lessons in their education, some students also wish to explore ways of teaching creative dance themselves (Ørbæk 2018). To give opportunities for PETE students to gain knowledge in dance and dance teaching requires time and effort, and the students who have experience of dance have a big advantage (Rustad 2017). Rustad claims that "students with limited or nonexistent experience of dance ought to gain bodily experience in dance as a support for their own teaching, and this is a time-consuming process" (p. 71, my translation). Furthermore, even if students gain experiences of dancing themselves and teaching dance during their PETE program, it is not a guarantee that they will teach dance when working as PE teachers (Rustad 2017).

Creative dance is often a new experience for PETE students (see e.g. Ørbæk 2018; Rustad 2017). When PETE students engage with movement activities unfamiliar to them, they can experience excitement and joy as well as with feelings of discomfort and fear (Barker et al. 2020). Participating in a creative dance lesson sometimes requires courage by PETE students. The need for courage is due to students' inexperience with creative dance and a sense of unfamiliarity (Lundvall and Maivorsdotter 2010). Many PETE students bring with them few experiences of dance and often have background in sports (Rustad 2012). As they begin their studies they associate PE with sport and health but not with dance (Ørbæk 2018). In addition, they often understand dance in terms of "performing steps in different dance forms" (ibid, p. 116, my translation). Some students can feel ridiculous while moving during creative dance lessons due to preconceptions of the purpose of creative dance teaching; to learn to 'master' the expression of movements (Lundvall and Maivorsdotter 2010). Ørbæk (2018) notes that their preconceptions of dance sometimes make them feel inadequate which activates worry, reluc-

tancy and fear even before they have begun to dance. This contention is supported by Rustad (2012), who suggests that due to students' background in sports, some of them perceive a risk of making them feel and look like fools if attempting to express themselves through movement during creative dance lessons in PETE. Social and gender norms seem to regulate the possibilities for students to move in certain ways, and students can feel uncomfortable if they move in ways that do not conform to what is expected by them (ibid; Heikkinen and Mattsson 2022). The students' experiences of discomfort could also be related pre-formed ideas about 'good dancing' relating to artistic conventions of dance (Gard 2006) or connected to feelings of exposure or a lack of dance experience (Backman et al. 2020). Similar observations have been made of school pupils' perceptions of risks of participating in creative dance lessons in studies in PE (Steinberg and Steinberg 2016). At the same time, PETE students can experience joy when creating dance together with their peers (Ørbæk 2018). As the students participate in creative dance lessons, they can express a curiosity of exploring how dance can involve something other than performing movement within different dance forms.

So, in short, in a Scandinavian context as well as internationally, PE teachers often lack experience with dance teaching and some of them express a will to teach more dance in schools. PETE students are often new to creative dance and are introduced to creative dance teaching during their PETE programs.

2.2.2. Ways of teaching creative dance

Here, I outline ways research literature has described creative dance teaching, with a particular focus on ways of inviting university students and school pupils to experience and explore creative dance. The research literature is scarce when it comes to creative dance teaching in PETE in a Scandinavian context (Engdahl et al. 2022; Ørbæk 2018; Rustad 2012; Ravn 2014). This outline consists of studies made in the context of PE and PETE in a Scandinavian context, and I have chosen to include a few international studies that have been valuable to, and discussed in, the Scandinavian context.

Inviting PETE students, as well as school pupils, to explore and experience that which can be unfamiliar allows them to develop their bodily competence (Ravn 2014), reconsider and potentially alter habits (Heikkinen and Mattsson 2022) or extend their abilities to act (Mattsson 2016). Looking at studies in a Scandinavian context, it seems key to creative dance teaching in PETE to guide students to move beyond what they are familiar with. Several studies of creative dance teaching in PETE support Backman et al.'s (2020) contention that due to, for example, young people's narrower movement

repertoire in comparison with some decades ago, PETE should include movement cultures unfamiliar to the students to further prepare them to teach in schools. For Lundvall and Meckbach (2012), for example, teaching creative dance can stimulate students' openness for the unexpected, the unknown and the surprising. Heikkinen and Mattsson (2022), emphasize that teaching involves ways of inviting students to leave their comfort zones.

Considering ways of teaching creative dance, Chappell's studies of what she calls teaching for creativity in dance³ with late primary age children in the UK (2005, 2007a, 2007b) provides valuable pedagogical insights for my thesis. For example, she identifies several pedagogical puzzles or dilemmas when teaching dance to children that are worth considering "to stimulate flexible and situationally responsive reflective practice, without becoming constrained into rigid 'how to' guides to teaching for creativity (2007b, p. 42). More specifically, Chappell (2007b) describes a 'pedagogical spectra' when teaching dance. The pedagogical spectra identifies central elements of dance teaching. The first element, 'creative source', consists of two dimensions. One dimension means that stimuli is child-derived with relatively unknown outcomes, defined as teaching *inside out*. The other dimension suggests that stimuli are teacher-derived with relatively predetermined outcomes, as with teacher-initiated demonstrations, defined as teaching *outside in*. The second element involves the consideration of 'proximity and intervention' in teaching. At one end of the spectra, the teaching is considered dialogical and reactive where the teacher, from a distance, provides space and time for the children to engage in exploration. Here, the teacher allows "children to instigate their own journeys" (ibid, p. 47). The notion of dance teaching, in terms of reactive intervention, echoes the idea of teaching with "descriptive instruction" and "metaphoric instruction" (Torrents et al. 2013, p. 106). These ways of teaching creative dance, identified by Torrents et al., mean that a teacher educator supports and guides PETE students' independent processes. The descriptive instruction uses terminology from PE or dance, such as referring to movements made 'in the sagittal plane', and can be perceived as confusing by inexperienced students. The metaphoric instruction uses metaphoric images, such as imagining transporting heavy objects or moving as if the students were oil. The metaphoric way of teaching creative dance can be inspiring both for inexperienced as well as for advanced students, help them understand assignments and become more interested in them (Torrents et al. 2013). At the other end of Chappell's (2007b) spectra, teaching is thought of as proactive at close range where the teacher remains close to the children

³ Chappell uses the definition "teaching for creativity in dance" to describe ways of teaching dance that aims to stimulate children's openness to what they might experience as unusual.

as they explore, can provide them with specific movement vocabulary and compositional knowledge. Proactive intervention in teaching can mean to challenge children through “focused *criticism* often proactively using ‘question clusters’” (ibid, p. 48, italics in original). This notion of teaching resonates with the idea of teaching with a kinetic model (Torrents et al. 2013, p. 106). This model of teaching means that a teacher educator supports PETE students’ movement exploration through specifically chosen motor examples or visual demonstrations. Torrents et al. claim that this model is useful when it comes to teaching inexperienced students. The third element of Chappell’s (2007b) spectra is ‘task structures’ and relates to responsibility sharing for creative activities. At one end of the spectra, the teaching involves risk taking and acceptance of failure, providing the children ‘licence to’ play and safety to enable exploratory processes. Providing a learning environment involving an acceptance of failure during lessons also comes across in other studies in PE and PETE. For instance, PETE students teaching school pupils in practicum encourage exploration by showing the pupils that they can move in silly and weird ways and by using assignments with movement imitation (Ørbæk and Engelsrud 2021). At the other end of the spectra, teaching involves a successive sharing of responsibility beginning with an “apprenticeship with tight parameters” (Chappell 2007b, p. 50). It can mean that the teacher begins by teaching specific movement vocabulary for the pupils to gain confidence, then continues by inviting them to interpret material they have developed, and ends by inviting them to dance more independently based on the skills gained and interpretations made. Chappell’s pedagogical spectra becomes particularly valuable in consideration of the PE teacher educators’ descriptions of their teaching practices and of the teaching during the pedagogical intervention study.

Improvisation is often part of dance teaching within and outside of PE and PETE. Improvisation seems to be important to creative dance teaching that aims to help PETE students to move outside their comfort zone (Backman et al. 2020), central to this thesis. Considering improvisation conceptually and etymologically, ‘pro’ and ‘videre’ means to *see ahead* and *to foresee*, and ‘im-’, meaning *not* and *opposite of*, negates this proposition. Improvisation often involves processes whereby students depart from movement experiences familiar to them into “unforeseen and unpredictable situations” (Rustad 2013, p. 87). Ravn (2014) describes dance improvisation as an exploration of movement possibilities without knowing in advance what will appear. Ravn points out that putting the familiar and pre-given on the line and into play with an aim to discover something new is central to understanding practices in creative dance. In order to teach improvisation, three essential considerations could be made: a) it is a pre-requisite that the group feels safe and trusts each other so they will dare to do mistakes, b) employ a relatively

concrete movement setup from which to begin the improvisation, and, c) try to create an environment where everything is possible (ibid). These pedagogical considerations are of importance when teaching do not prescribe how students should move or act but suppose movement and actions to be produced through processes of exploration (Larsen and Karlefors 2015). Moreover, Rustad (2012) has studied PETE students' experiences of working with dance improvisation and contact improvisation, dance forms uncommon outside of a dance professional environment and unfamiliar to the students. In the study, teaching provided students with opportunities to, for example, improvise with movements of various kinds based on tasks given to them. Dance improvisation gave the students new movement experiences that expanded their experience in movement and dance.

Movement imitation is employed in dance teaching in PE and PETE, for instance to teach specific dances from other cultures, social couple dances or combined series of movements and steps (Ørbæk and Engelsrud 2021; Gibbs et al. 2017; Ravn 2014; Quennerstedt 2013). Movement imitation can be regarded a way to invite movement exploration (Ravn 2014). In other words, movement imitation can be regarded as a useful way to invite often inexperienced PETE students to participate in creative dance lessons. Ravn adds that by movement imitation, students can explore various ways of moving and kinesthetic sensations based on their movement experiences. Moreover, Ørbæk (2018) shows that movement imitation by means of a mirror assignment, developed by the Russian actor and director Konstantin Stanislavski, can create a safe space for exploration during creative dance lessons. With a phenomenological reading, Ørbæk shows that when PETE students are taught mirror assignments, the pair of students who mirror each other can be offered opportunities to engage in bodily dyadic interaction. This can mean that the movements of the students melt together and create mutual movement sequences. To further discuss students' participation in mirror assignments, Ørbæk quotes the phenomenologist Fuchs suggesting that the students "literally extend and connect with each other" (2018, p. 79). Creative dance teaching by means of mirror assignments is explored in the pedagogical intervention study.

Laban's movement framework has been and is still used in creative dance teaching in PE and PETE today. As stated in Chapter 2.1.2., the expressive or modern forms of dance had a profound influence on the aesthetic form of gymnastics in PE and PETE during the first half of the 1900s. This influence has continued to develop both in Europe and in the U.S. Laban, who was a key figure in this development, is counted as one of the most influential theorists in the teaching area of dance in physical education in the western world (Engdahl et al. 2022). His ideas have influenced teaching in creative

dance in school (Fajnborg Hovman Elley 2019; Gilbert 2015), been used in observations and analyses of students' movement qualities in PE (Lundvall 2015c; Gibbs 2014) as well as having provided a conceptual movement framework for teaching dance in PE (Ørbæk 2021; Neville and Makopoulou 2021; Mattsson and Larsson 2020). Laban's work, as well as the aesthetic form of gymnastics which female PE and PETE teachers developed in the early 1900s, reflected the 20th-century understanding of dance as bound to human embodiment, as the bodily expression of an interior psychological state (Leon 2022). When Laban's concepts are used in today's creative dance lessons in PE, they sometimes support exploration of non-predetermined movements in teaching (Mattsson 2016). The teacher becomes a kind of a sounding board on which school pupils can test out their movement ideas (also see Gibbs 2014). Concepts from Laban, related to for instance effort, are used to initiate dance assignments and to provide feedback to the pupils (Mattsson and Larsson 2020). By having PETE students explore various movement efforts, such as time and weight, they can train their abilities to dare to express themselves (Persson and Arvidson 2022). Laban's concepts in creative dance teaching can offer opportunities for students to explore the unknown in dance by facilitating risk taking (Murelius and Henriksson 2022). Spatial concepts, such as levels and planes, can be employed to inspire students to experience movements unfamiliar to them and to dare to use their body in new ways. Furthermore, Laban's movement framework is viewed as part of the pedagogical spectra described above. For instance, Chappell (2007a) writes that Laban's movement framework is useful when it comes to teach movement composition in PE. In the unsubmitted manuscript and in article two, I will come back to in what ways the use of Laban's framework have influenced creative dance teaching in PE and PETE.

Lastly, I would like to describe several other key aspects when it comes to teaching school pupils and university students in creative dance in PE and PETE. Music is considered to impact on how pupils engage in movement exploration (Mattsson 2016). Using music in teaching can either inspire or restrict an exploration of unpredictable movements depending on teachers' choices of music that is familiar or unfamiliar to the students (Heikkinen and Mattsson 2022; Mattsson and Larsson 2020). Moreover, using material objects in creative dance teaching, such as balloons and scarves, can invite both pupils in PE and PETE students into processes of exploration (ibid; Frisk and Karlsson 2022; Ravn 2014). Informed by socio-cultural theory, Quennerstedt et al. (2012) argue that material artifacts, such as stands, rings, balls, rackets and goals, play a part in activities in the physical educational setting. From this point of view, artifacts are expected to be used by teachers and pupils to generate movement learning such as to jump, swing or throw. Material objects in creative dance teaching are explored in the

post-anthropocentric and Deleuzian analysis of the empirical material from the pedagogical intervention study in article four. Furthermore, by providing opportunities for students to reflect on their experiences of participating in, and teaching, creative dance, they can understand purposes of their actions and develop new ways to teach (Ørbæk 2018). Allowing time for students' reflections on their ideas of dance and of their experiences of moving during lessons can be a way to encourage students to expand their movement potential and think in new ways (Heikkinen and Mattsson 2022; Persson and Arvidsson 2022). Ørbæk (2018) also shows that pupils, through discussions with peers, can identify different movement ideas to include in their exploration. To create a safe learning environment for movement exploration, PE teacher educators might also consider dimming the light in the gym or creating new spaces in the gym by delimitations (Murelius and Henriksson 2022; also see Mattsson 2016). Teachers can also incorporate play into lessons to generate a potentially safe learning environment (Rustad 2013). The importance of providing students with a safe learning environment for movement exploration is explored further in the unpublished manuscript as well as in all three published articles in my thesis.

2.2.3. Embodied experience in dance

In this section, I provide reflections on some different aspects of embodied experience in dance, specifically relevant to my aim to explore how creative dance in Swedish PETE can be experienced. Creative dance in PE is sometimes viewed as providing a unique learning opportunity in education because of its self-expressive pedagogy⁴ that emphasizes school pupils' embodied experience in dance (Payne and Costas 2021). The aspects of embodied experience in dance that I present here come from studies which have worked with the frequently used theoretical approach in creative dance studies in PE and PETE – phenomenology. By giving a short outline of this theoretical approach below, I aim to provide some context for these studies.

Phenomenology is a philosophical and methodological tradition that consists of several directions. Common across the different directions are research interests exploring phenomena that have meaning for experiencing subjects (Ørbæk 2018). Arnold (1979) was one of the first to work with a phenomenological approach in PE studies. Drawing from phenomenology and existentialism, he claimed that an embodied sense of being-in-the-world is central to understanding meaning in movement, sport and PE. He argued

⁴ The idea of dance as a form of self-expression for PETE students and school pupils has been highlighted in studies of creative dance in PE and PETE (Persson and Arvidsson 2022; Mattsson 2016; Bergmann 1995).

that it is only when one partakes in movement activities from the first-person and inside point of view that one comes to know what movement means. Arnold's conceptualization of education 'in' movement continues to be relevant more than thirty years later for understanding how pupils and students develop meaning in movement (Brown 2013). Any extension of phenomenological thinking towards dance will inevitably show an interest in movement experienced by subjects (Østern et al. 2023; Rothfield 2005). Sheets-Johnstone (2011, 2010), a phenomenological scholar influential in the field of dance, regards humans' ability to sense movement – to do with kinesthesia – at the core of what it means to know dance. Kinesthetics comes from Greek *kinein*, meaning 'to move, set in motion', and *aesthesis*, meaning 'capacity for sensation'. Sheets-Johnstone (2019) writes: "I am kinesthetically sensitive to the qualitative dynamics of my movement. I can scratch harder or softer, for example; I can speed up the playing of this melody... What I do is... a movement that has a quite specific qualitative dynamic that I feel" (p. 160). Ørbæk (2018) has used, for instance, Sheets-Johnstone's concept kinaesthetic experience to gain insight into what PETE students experience when moving, alone and with others. For example, by acknowledging PETE students' kinaesthetic experiences, Ørbæk observes that at moments when students experience fear during creative dance lessons, they express emotions by tensing and tightening muscles or by becoming immobile.

Also informed by phenomenology, Chappell (2007a, 2007b) states that central to creative dance teaching is to provide opportunities for children to sense movement from within while dancing (2007b). Chappell describes sensing in terms of how children "feel... their energy... being aware of what they're doing... [to do with] kinaesthetics" (ibid, p. 44). Furthermore, Ravn has made phenomenologically-oriented readings of creative dance within and outside the institutional context of PE and PETE. For example, she argues that those practicing expressive and creative dance can learn novel ways to see and sense their own movement (Ravn 2022). Students can "become even better at fine-tuning and shifting the dynamic quality of a movement sequence... [and the student] senses, is aware, and specifies the quality of the actual movement while moving" (ibid, p. 5). Ravn suggests that movers' embodied experiences 'in' movement are central to what it means to learn dance and that sensorial awareness guides the improvisatory processes involved in learning to dance. When studying a phenomenological approach to agency in improvisation, she notes that improvised dance involves dancers' embodied readiness to cope with the live and non-static conditions of a performance, for instance to handle minor adjustments such as coordinating movements when in physical contact with others or adjusting to the tempo of the music (Ravn 2020).

The phenomenological approaches that I have briefly outlined here seem to provide valuable ways to study PETE students' and school pupils' participation in creative dance from first-person and inside point of view.

2.2.4. Summary

Through the overview of research literature it is possible to discern how PE teachers can feel uncomfortable incorporating dance in their teaching, including creative dance teaching, due to lack of experience. The overview further shows that some PE teachers state that they would like to allocate more time to teaching dance. I have also found that PETE programs are regarded as responsible for including movement cultures unfamiliar to the students, such as creative dance, to further prepare them to teach in schools. Furthermore, from the overview it is also possible to claim that creative dance teaching in PETE can involve both risking discomfort or fear and encouraging students' curiosity to teach creative dance.

I have also identified specific ideas about ways to teach creative dance in PE and PETE. These ideas relate to a pedagogical spectra of teaching and how Laban's movement framework, music and material objects influence ways of teaching. Furthermore, improvisation is also highlighted in creative dance teaching, as well as movement imitation regarded as a way to invite exploration in creative dance teaching in PE and PETE. Through the overview I have also reflected on different aspects of embodied experience in dance in PE and PETE. Moreover, the overview shows that research focusing on studying PE teacher educators' ideas about creative dance teaching in a Scandinavian context is scarce, as well as how students experience creative dance in PETE.

3. Theoretical approach

In this chapter, I will outline the theoretical approach in my thesis. In what follows, I present my understanding of parts of the work of Gilles Deleuze (1925-1995) and specific concepts relevant for this thesis: striated and smooth space, experimentation, sense, materiality and assemblage.

3.1. Approaching Deleuzian scholarship

In this thesis, I engage with Deleuze's philosophy (e.g. Deleuze 2002; Deleuze 1994; Deleuze and Guattari 1987). This philosophy guides this thesis in exploring process-oriented aspects of creative dance in PETE and challenges and opportunities in creative dance teaching (see the analysis of the interview study in article two). It also inspires ways of teaching creative dance, as will be seen with the pedagogical intervention study, as well as guiding explorations of expressions and experiences involving indetermination in PETE students' dancing (see the abductive analysis of the pedagogical intervention study in article three). Moreover, his philosophy suggests a materialist world view, which means that human and non-human materialities are always interconnected in creative dance lessons (see the post-anthropocentric and Deleuzian analysis of the pedagogical intervention study in article four). Deleuze develops numerous concepts attached to his philosophy, several of which are central to my thesis. Before I further depict these concepts, I will provide some context for his work and describe parts of his philosophy relevant for this thesis.

Deleuze was part of a generation of thinkers, including for instance, Michel Foucault (1926-1984) and Jacques Derrida (1930-2004), formed in the aftermath of the Second World War and during extraordinarily creative decades in twentieth-century French thought (Patton and Protevi 2003). In this intellectual milieu, Deleuze showed a fascination for ontology, especially an ontology of difference (Bright 2020; May 2005). Before publishing his thesis *Difference and Repetition* in 1968, he had already written and published a number of texts on various philosophers, such as Friedrich Nietzsche

(1962), Henri Bergson (1966) and Baruch de Spinoza (1968). In 1969, Deleuze met the psychoanalyst and political philosopher Félix Guattari, a meeting which reorganized Deleuze's philosophy slightly towards a social and political engagement (Sauvagnargues 2005). Guattari had a history of political involvement and of psychiatric work, and was not a philosopher by training (Deleuze and Parnet 1987). Their collaborative writing resulted in, for instance, *Anti-Oedipus, Capitalism and Schizophrenia* (Deleuze and Guattari 1977) and *A Thousand Plateaus, Capitalism and Schizophrenia* (Deleuze and Guattari 1987). There has been a growing interest in the work of Deleuze and Guattari across a wide range of fields extending from philosophy (Grosz 2007), feminist theory (Braidotti 2022; 2011), psychology (Nichterlein and Morss 2017) and professional dance (Rothfield 2017).

3.1.1. Deleuze's philosophy

Deleuze developed a philosophy of immanence. Immanence comes from Latin *immanere*, meaning 'remain' and 'to dwell in'. Deleuze noted a problematic dualist and hierarchical ontology of transcendence⁵ that depreciates certain aspects of the world, such as materiality. Deleuze turned to Spinoza in order to develop his own philosophy of immanence. Spinoza, and consequently Deleuze, consider that there is no transcendent principle or external cause to the world. There is no presupposed hierarchy between different substances of the world. For these two thinkers, there is only one material substance. Deleuze's philosophy of immanence is relevant in my thesis as it enables me to, for instance, explore how what exists in the material world reciprocally depend on each other, and how human and non-human materialities are always interconnected (see the post-anthropocentric and Deleuzian analysis in article four and Chapter 6.2.). As will be outlined below, his philosophy directs attention to terms like streams, flows and forces to understand a world based on movement (e.g. Deleuze 2002).

Deleuze's work is sometimes described as process philosophy. When he for the first time begins to develop his own philosophy in *Difference and Repetition* (Deleuze 1994), he suggests that the concept of indetermination points to a primary feature of

⁵ Transcendence comes from the Latin prefix *trans-*, meaning 'beyond', and the word *scandare*, meaning 'to climb'. For instance, in religion, transcendence entails that God's nature is in essence completely independent from the material and physical universe. In philosophy, transcendence presuppose the existence of two ontological substances. With transcendent philosophers, for example Plato and Kant, philosophy is the endeavor to seek the transcendent Truth (Deleuze 1994). Deleuze's philosophy can be seen in contrast to philosophies of transcendence (Lenz Taguchi 2012; May 2005).

reality. Specific subjects (such as students), experiences (such as experiences of moving certain ways) and objects (such as hula-hoops and blindfolds) are considered as temporary actualizations (also see May 2005). This implies a world view that does not presuppose separate and predefined subjects and objects. In *Difference and Repetition*, Deleuze uses various different concepts to refer to the notion of an indeterminate world of movement and flux. These are concepts often seen as key to Deleuze's philosophy, for instance, difference in itself, the virtual, and becoming. I have chosen to use the concept indetermination as it explicitly points out central ideas about creative dance teaching in PETE explored in this thesis.

3.1.2. Deleuze's concepts in physical education research

Although Deleuze did not consider education in any detail – Deleuze (1994) wrote a few notes on learning and teaching – his writing has influenced the research field of education (Johansson 2015; Kane 2015; Semetsky and Masny 2013; Olsson 2009). For instance, Deleuze invites us to think that education means to work “with unpredictable becomings... It directs us towards processes,... open-ended and unstable” (p. xx, Dahlberg and Moss in Olsson 2009), as done in this thesis. Deleuze's writing has also offered numerous ways of thinking about sport science (Eriksson and Jonasson 2023; Linghede 2019, Markula 2019; Fullagar 2017; Giardina 2017). In the last decade, Deleuzian scholarship has influenced physical education research. For instance, Larsson et al. (2021) theorize movement learning guided by Deleuze's work. For example, they use Deleuze's triadic relation between percepts, affects and concepts to expand notions of what they refer to as kinesiocultural exploration in learning. Drawing on Deleuze and Guattari's concepts of affect and assemblage, Landi (2019) studies how queer subjectivities are produced in PE through the interaction of things like human bodies, pants, masculinities and capitalism. Hordvik et al. (2019) engage with Deleuze and Guattari's concept of the rhizome to consider how various human and non-human elements, that is the PETE students, their contexts, pupils and teaching content, influenced and shaped the PETE students' teaching while in school placement. They argue that giving account for complex rhizomatic structures of teaching and learning in physical education can move the focus from outcomes to the processes of teaching and learning. Thinking with relational materialism and Deleuze's concept of becoming, Mikaelis (2017) explores pedagogies of outdoor education where mutual and relational engagements with matter and the more-than-human are central, opening up new possibilities for relations to place. Furthermore, Deleuze's conceptual framework has also been employed in the context of professional dance education. For example, Anttila et al. (2019) argue that Deleuze's

concept of difference provides a way to think about shared dance education contexts where cultural differences may be affirmed and welcomed.

So, scholars in PE and PETE have used a number of Deleuze's concepts to, for example, issues of processes of teaching and learning, interactions, relational engagements and affirmation of cultural differences. In this thesis, Deleuze's work contributes to ways explore how creative dance in Swedish PETE is taught and experienced.

3.2. Putting Deleuzian concepts to work

The concepts I that have chosen to engage with in my thesis – striated and smooth space, experimentation, sense, materiality and assemblage – play part in Deleuze's philosophy. In this thesis, the concepts are activated in regard to how they can both confirm and challenge ways of understanding teaching and experience in creative dance in PETE.

3.2.1. *Striated space and smooth space*

For Deleuze, the world becomes produced through constant tensions (Johansson and Hall 2019; Spindler 2013). Such tensions can be defined by the concepts striated space and smooth space (Deleuze and Guattari 1987). A striated space is made up of things like regulations and expectations that temporarily structure movement. In relation to teaching practices, the striated can be said to reflect a structured space in which actions are predefined according to specific teaching aims. Physical education spaces can be considered striated according to, for example, ideas and practices of sport and fitness (Larsson and Redelius 2008). Striations can be rules, for example rules of basketball, or expectations, such as of how to participate in particular games during lessons, that regulate the movements of students (Landi et al. 2016). Yet, striated spaces are never fully determined because they exist reciprocally with smooth spaces which destabilize them. Smooth spaces are open and directions change according to the journey itself (Deleuze and Guattari 1987). In view of Deleuze's philosophy that I depicted above, a smooth space can be said to be a space in which movements and directions are indeterminate. The concepts striated and smooth space – as well as the nomad and the migrant depicted below – will be central to the analysis of the interview study presented in article two which explores relations between, for instance, expectations of 'what counts' as dance and processes of movement exploration.

In a later work together with Guattari, Deleuze employs the conceptual figure of the nomad (Johansson 2017; Deleuze and Guattari 1987). The Deleuzeguattarian nomad moves in smooth spaces where directions continuously change. The nomad is one who moves, yet not from a specific point of departure or towards *this* or *that* end. Deleuze and Guattari (1987) distinguish the nomad from the migrant. The migrant is someone who goes from one particular point to another, where the first point is a familiar one and the second point uncertain and unforeseen. With the migrant, momentary passages of smoothening are generated that allow for the flow of unpredictable movement (Rosenlund Hansen, et al. 2017; Johansson 2015).

3.2.2. *Experimentation*

Movement and experimentation play central roles in the Deleuzian oeuvre (Jeanes 2006), as in my thesis. As described above, Deleuze offers a world view of non-predetermined streams, flows and forces. Deleuze and Guattari (1987) invite ideas about how to operate in such a world, and urge the reader to “experiment with the opportunities it offers, find an advantageous place on it, [and] find potential movements of deterritorialization” (p. 161). The idea to create advantageous spaces for experimentation is one useful way to understand creative dance teaching in PETE as it is described and discussed in this thesis.

Deleuze quotes Spinoza directly as he emphasizes an element of indetermination defining our lives: “We can speak... of the thousand ways of moving the body, of dominating the body and the passions – but *we do not even know what a body can do*” (Deleuze 1988, p. 17-18, italics in original). This does not mean that Deleuze believes that the body can do anything, but rather, that it is not pre-given what a body will do (Brians 2011). Furthermore, Deleuze did not develop a specific theory of the body (Hughes 2011). Moreover, many ideas about the body permeate his work that overall suggest that his “theory of the body... opens it up as a site for... experimentation” (ibid, p. 5).

Deleuze’s philosophy implies no transcendent, pre-given idea about how the world will unfold. To experiment means to act without any assurance about the results of one’s experimenting (May 2005). The concept experimentation will be central to the analysis of the interview study in article two, to explore the PE teacher educators descriptions of creative aspects of dance in their educational practice. It will also be central to the analysis of the empirical material in article three to explore what PETE students express and experience when participating in creative dance lessons. Experimen-

tation can also be regarded in relation to the notion of experience. In Chapter 2.2.3., I described different aspects of embodied experience in dance in PE and PETE. In my thesis, experience can be understood in relation to Deleuze's native language; in French, the word *expérience* means both 'experience' and 'experiment'. To experience can be said to involve an element of indetermination.

3.2.3. *To sense*

Deleuze claims that the becoming of the world can only be sensed. This implies that the "complicated, properly chaotic world *without identities*" (Deleuze 1994, p. 57, italics in original) is not something one can fully identify or pin down, but rather sense. May (2005) uses the word 'to palpate' as a concept of how one can get a sense of the becoming of the world. When a doctor palpates, he or she cannot directly touch the disease, but feels around to get a sense of what is going on. In philosophy, a philosopher can by the use of concepts create a zone where the sense of the becoming of the world can emerge without experiencing it directly (ibid). May writes that Deleuze introduces a philosophy "that does not seek to reduce being to the knowable but instead seeks to widen thought to palpate the unknowable" (ibid, p. 171). The concept of palpation will be central to the analysis of the empirical material in article three to explore what PETE students express and experience when participating in creative dance lessons (also see Chapter 6.2.).

As noted in Chapter 2.2.3., an interest in PETE students' attention to their movements and movement qualities while moving is seen in the research literature on creative dance in PETE (see e.g. Ravn 2022). Rothfield (2017) notes that it is common that dancers, during professional dance training, are occupied by the way their individual bodies feel while dancing, referred to as "somatic modes of attention" (p. 124). She also writes that "there are times when the dancing does not quite line up with this kind of subject-centered approach" (p. 120, also see Manning 2014). Rothfield highlights, in the area of postmodern dance, ways to understand a kind of dancing that embraces the "expressions of force in action" (2017, p. 148). While Rothfield puts Deleuze's reading of Nietzsche to work to explore notions of movement experience, I have chosen to engage with Deleuze's (1994) concept sense and May's (2005) palpation. The chaotic world *without identities*, also indicated by Deleuze's concepts like difference in itself, the virtual, and becoming, is not something that can be thought nor experienced directly, but (only) sensed (Bryant 2008; May 2005). Furthermore, Deleuze's notion of sense differs from the notions offered by phenomenologically oriented studies outlined above,

that is to do with sensing, as in being aware of, specific qualities of one's movements while moving.

3.2.4. *Materiality and assemblage*

Given that Deleuze's philosophy suggests a materialist world view, his notion of an indeterminate world of flux involves movement of human and non-human elements. This idea comes across in posthumanist theory. In this section, I outline posthumanist theory and define the concepts materiality and assemblage.

Posthumanism concerns ways of approaching, for instance, notions of agency other than the array of humanist views associated with the emancipatory and anti-fundamentalist ideals of the Renaissance and the Enlightenment (Åsberg 2012). Posthumanism is a term that denotes a thinking critical to the notion that the human is the center and departure point of being in the world (Lenz Taguchi 2012). Posthumanist theory poses critique of terms often key in qualitative research, such as experience and subjectivity. This critique suggests that these terms are related to an anthropocentrism that privileges the experiencing and acting self (Brinkmann 2017). Hultman and Lenz Taguchi (2010) claim that most educational research focuses on anthropocentric matters concerning humans and human meaning-making. They propose that this focus neglects other non-human forces that are at play in educational practices. Hultman and Lenz Taguchi are interested in, amongst other things, exploring what emerges *in-between* different bodies. Ceder (2019) notes that a post-anthropocentric approach can provide alternatives to the notion of the human in the center of, for example, society or education. Post-anthropocentric alternatives are central to, for instance, critical animal studies, environmental theories, and posthumanist theories.

Deleuze's work is sometimes regarded as posthumanist, even if he himself did not use such terminology to relate to his philosophy (Lenz Taguchi 2012). A frequent use of posthumanist ideas in education is to include nonhuman elements in educational research (see e.g. Ceder 2019). Lenz Taguchi (2012) writes that with a philosophy of immanence educators are invited to consider how all that exists are reciprocally dependent on each other. By thinking with Deleuze, she claims that how things depend on each other is not predictable as one cannot foresee exactly what new and other relations might be produced. With Deleuze's philosophy of immanence, elements – such as bodies, actions, passions and statements – co-exist non-hierarchically (Livesey 2013). In other words, the elements ought to be understood as co-constitutive and co-dependent

(Ceder 2019; Johansson 2017). As elements temporarily form arrangements, or relations, they are referred to as assemblages (Deleuze and Guattari 1987).

With posthumanist theory, all matter – human and non-human – are agential. In the post-anthropocentric and Deleuzian analysis in article four, I explore the notion of assemblage following Deleuze’s philosophy, whereby I view assemblages as mixtures of particular co-acting materialities (also see Chapter 6.2.). The focus on matter is central to posthumanist educational research inspired by Deleuze (Ceder 2019). With posthumanist studies, the notion of the body goes beyond the human body. In collaboration with Guattari, Deleuze came to refer to bodies as any bodies in the world; human or non-human, animate or inanimate (Colman 2012). Hultman and Lenz Taguchi (2010) write that the body “can be any kind of body; a human body, an organ, an artefact or any kind of matter” (p. 529). Furthermore, they are interested in exploring how human and non-human materialities affect and become affected by each other. In Deleuze’s (1988) book on Spinoza, he writes that a body (human or non-human) is defined by its capacity for affecting and being affected by other bodies. In other words, a body can be said to be defined by verbs rather than nouns, i.e. by what they do.

3.2.5. *Summary*

Deleuze’s philosophy is central to my thesis. His philosophy involves a world view where streams, flows and forces form the world we inhabit (e.g. Deleuze 2002). His philosophy also focuses attention on how the concept of indetermination points to a primary feature of reality (e.g. Deleuze 1994). The work of Deleuze guides my exploration in several ways. Relating to the empirical materials of the interview study presented in article two, Deleuze and Guattari’s concepts striated and smooth space and experimentation guide my analysis of, for example, process-oriented aspects of creative dance. Concerning the empirical materials of the intervention study presented in articles three and four, the concepts palpation, sense, materiality and assemblage are put to work. In the next chapter, I present the methodological approach in my thesis.

4. Methodological approach

In this chapter, I outline my research design. I use several methods in light of my research questions. The thesis builds on three studies: a literature review, a qualitative interview study and a pedagogical intervention study. Based on the interview study and the intervention study, I made two abductive analyses and a post-anthropocentric and Deleuzian analysis. The chapter ends with reflections on my role as a researcher, ethical considerations and thoughts on trustworthiness and quality.

4.1. Literature review

To address the aim to explore creative dance teaching in PETE, a literature review was made. The specific aim of the review was to explore how different theoretical approaches are used in studies of creative dance teaching in PE and PETE. A rationale for the study was that, as theoretical approaches are used in research studies of creative dance teaching in PE and PETE (cf. Sohlberg and Sohlberg 2019), they can potentially affect PE teacher educators' and PE teachers' creative dance teaching practices as they integrate research in teaching. The unpublished manuscript is based on the literature review.

In accordance with the aim of the review, I was inspired by the methodology of a narrative review (Barker et al. 2022; Green et al. 2006; Mays, Pope, and Popay 2005). The methodology enabled me to summarize, compare, explain and interpret research relevant to my aim (Mays, Pope, and Popay 2005). Narrative reviews sometimes lack transparency because they give limited descriptions of how the reviews are conducted (Aartun et al. 2022). To meet this critique, the following part of the chapter provides a description of the reviewing process. A further detailed description of the review process is provided in the manuscript.

The literature review focuses on research literature on creative dance in PE and PETE. From the three databases Discovery, SportDiscus and ERIC, I retrieved 12 studies specifically of creative dance in PE and PETE. In addition, one further step was

made. The existing literature on creative dance from the syllabuses from the eight Swedish PETE institutions were included, adding 21 works, and resulting in a total of 33 peer-reviewed empirical studies of creative dance in PE and PETE.

The first step of the analysis entailed extracting all sections of the texts that involved the words ‘creative’ and ‘dance’ in English, Swedish, Danish and Norwegian. At this stage, I identified that all empirical materials discussed creative dance in terms of exploration. For that reason I included exploration in the analysis by extracting all sections of the texts that involved the words relating to ‘exploration’. The next step meant that as I read and re-read the literature I considered research question one (RQ 1): How are theoretical approaches used in studies of creative dance teaching in PE and PETE? At this stage in the process I also developed two analytical questions (AQs): AQ1) What central ideas about creative dance teaching permeate the literature? and AQ2) How are theoretical approaches used to explore these ideas? The last step involved summarizing, comparing and interpreting the extracts in the literature while considering the AQs. This step also entailed moments of returning to the full articles for further reading.

4.2. Qualitative interview study

To address the aim to explore how creative dance in Swedish PETE can be taught and experienced, I chose to study how PE teacher educators describe creative aspects of dance in their teaching practice. In this section, I describe how I planned the study and how I conducted and analyzed the interviews.

4.2.1. *Planning the study*

I conducted qualitative interviews as a method to provide the study with detailed information about creative dance teaching in Swedish PETE. Using interview as a method is the most common way to generate qualitative data in sport science (Smith and Sparkes 2019). According to Miller and Glassner (2016), qualitative interviewing is a useful method to provide researchers with individuals’ perceptions of their place within their social worlds. The study was guided by the notion that “[w]e cannot observe feelings, thoughts, and intentions... We interview to find out what is in and on someone else's mind, to gather their stories" (Patton 2002, p. 341). One teacher educator was selected from each of the eight PETE institutions in Sweden to participate in the study (n=8). A purposive sampling strategy (Armour and Griffiths 2012) was used, and each participant was primarily responsible for dance teaching at their respective PETE institutions.

Four of the participants had completed a bachelor's degree in PE, while the other four had completed a bachelor's degree in dance pedagogy. Three of them had worked as teacher educators between one to five years, while five of them had worked more than ten years as teacher educators. In terms of the sample and trustworthiness of the study, although the teacher educators were relatively few, the interviews were seen as 'information-rich cases' (Patton 2002, p. 230) from which I could learn a lot about creative dance teaching in PETE.

A general interview guide approach (Patton 2002) was used to provide detailed information about the teacher educators' perceptions of creative dance teaching. Aligned with Patton, the purpose of the interviews was to "capture how those being interviewed view the world, [and] to learn *their* terminology and judgements" (ibid, p. 348, italics in original). The interviews had low degrees of structuring and standardization (Patel and Davidson 2011). The structure of the interviews was flexible with the intention of giving both the interviewees and I space to ask new questions and address aspects that could not be predicted in advance. This approach allowed me to alter both the order of the questions and the way in which they were phrased. The interviews were conducted in the interviewees' native language (Swedish) so that they could offer their descriptions without hindrance of using a foreign language. The interview questions focused on the participants' perceptions of creative aspects in dance teaching and followed two overarching lines of inquiry: (a) content and structures in teaching when exploration and creation are of central importance, and (b) notions of creativity.

Before doing the first interview, I carried out a pilot interview with a colleague who taught dance in PETE and who had similar background and knowledge of the research topic as the interviewees. As I hadn't conducted a formal research interview before, the pilot interview helped me to understand that my ways of formulating sentences created conditions for certain types of answers. For example, to start with "imagine that I was a student" or "can you tell me, with as many details as possible..." generated a lot of empirical material related to how PE teacher educators describe their teaching of creative aspects of dance. The pilot study also gave me the opportunity to create follow-up questions that helped me further create relevant empirical material (Patton 2002). After the pilot study I revised the interview guide. For instance, I generated various follow-up questions to potentially provide more reflections on their teaching practices.

4.2.2. Conducting the interviews

All interviews except one were conducted in a private space at the PETE institution where the interviewees worked. One of the eight teacher educators was interviewed when the interviewee visited the institution where I worked, and one taught at the same institution as I. The interviews were recorded by a voice memo application on my mobile work phone. Each interview was approximately 80 minutes long and I produced brief reflective notes throughout the interviews. The notes supported the interview and included key words that the interviewees emphasized allowing me to create potential follow-up questions.

The empirical materials were produced by me as an interviewer together with the interviewees. This means that the descriptions made through the interviews depended on the experiences and presumptions I and the interviewees had, and that the empirical materials were not objectively ‘found’ (Gunnarsson and Bodén 2021; Smith and Sparks 2019). Most often during the interviews the roles of interviewer and interviewee were distinct, meaning I was supposed to ask questions and the interviewee to provide reflections based on my questions. Occasionally, the interviews could be regarded as dialogues between two people, some of whom had met before, with considerable experience from teaching creative dance in PETE. It was most obvious when we talked about how to interpret specific terms used in teaching, such as concepts of Laban. In addition, doing the interviews at the place they usually teach likely affected how and what could be said. For instance, it might have provided a sense of closeness to the teaching area central to the interviews (Edwards and Holland 2013). Furthermore, considering how materialities might affect empirical interview material (Gunnarsson and Bodén 2021), a few times during the interviews I registered that the interviewees were reminded of producing data for a research project when seeing my mobile work phone on the table in front of us. This might have led the interviewees to be guarded and they perhaps shared less personally sensitive information.

The material was transcribed within a few days of each interview, with the intention to recognize terminology and descriptions that would further help me capture the complexities of their individual perceptions in the following interviews (Patton 2002). The transcribed material resulted in 112 pages of single-spaced text. Transcription notation included pauses (marked by three dots) and intonations (emphasized in italics).

4.2.3. Analysis of the interviews

Article two is based on an analysis of the interviews. The analysis was conducted with an abductive approach, specifically as “a movement back and forth between inductive and deductive approaches” (Graneheim et al. 2017, p. 31), together with a collaborative and iterative process guiding the analytical procedure.

The analysis was characterized by a systematic process where data and theory were continuously re-visited and discussed by my two co-authors and me. I began by reading the transcripts while making notes in the comments section of the document. My reading was inductive, in that it involved a search for patterns, such as how specific terms like ‘explore’, were reiterated by the interviewees. My reading was also deductive, as I sometimes connected statements to Deleuze and Guattari’s concepts smooth and striated spaces and experimentation. For example, based on my understanding of the concept experimentation, I noted down potential ways to interpret statements such as ‘Movement exploration can be done in millions of ways’ in consideration of the concept. After that step, the three of us read the transcripts. We then discussed the transcripts in light of theory. For instance, we explored what kinds of striations could be identified in the empirical material that seemed to affect the teaching.

Although the understanding we developed of the empirical material, as well as the writing up at the end of the analytical process, was done as a process of sharing of thoughts, ideas and experiences, I was the one with most insight into the interview material, the theoretical concepts and who most often initiated discussions and writings. In the next step of the analysis, I examined the empirical material with the use of the concepts smooth and striated spaces and experimentation. Here, I also took research question two (RQ II) into account: How do Swedish teacher educators describe their teaching of creative aspects of dance in PETE? At this stage in the analysis I developed two AQs: AQ1) How do smooth and striated spaces unfold in the teachers’ descriptions of teaching creative aspects of dance? and AQ2) How do the teachers speak of their teaching in terms of teaching experimentation? Quotes were then sorted into themes and subthemes were identified. Finally, we discussed the themes and subthemes in consideration of the two analytical questions.

4.3. Pedagogical intervention study

Having explored PE teacher educators’ descriptions of creative aspects of dance in their teaching, I turned to my own teaching practice. To further explore how creative dance in

Swedish PETE can be taught and experienced, I designed and implemented a small pedagogical intervention study with eleven PETE students and me as a teacher/researcher. In this section, I describe how I planned the study, structured the teaching and analyzed the empirical material.

4.3.1. Planning the study

The pedagogical intervention was designed and implemented as a pedagogical unit containing creative dance teaching in a dance course for students in a Swedish PETE program with me as a teacher/researcher. Following from insights from the preceding interview study, I was interested in exploring creative dance that involved teaching that rarely prescribes how learners should move or act but supposes movements and actions to be produced through a process of exploration (Larsson and Karlefors 2015). Pedagogical interventions are useful for exploring ways to understand teaching practice and its context (Gunnarsson and Bodén 2021). Intervention studies have been successfully conducted studying teaching and learning processes in dance in PE (Mattsson 2016; Gibbs 2014). This study is not to be understood as an evidence-based study, in which case the intervention method could be used to study causes and effects in a phenomenon (Schenker 2022). I am cognizant of the small sample of the pedagogical intervention and of not making broad generalizations. That said, with the aim to explore how creative dance can be taught and experienced in Swedish PETE, the design of the intervention included the reflections and actions by the participants in the study, i.e. by the students and me. For further reflections on how my role as “practitioner researcher” (Casey et al. 2018, p. 8) affected the production of the empirical material, see Chapter 4.4. The sampling of the course was characterized by “purposive sampling” (Armour and Griffiths 2012, p. 209), where the course was chosen due to its relevance to my aim. The study was implemented within an existing PETE program in a course where one of the central learning goals was to, in an expanded way, analyze and communicate a teaching area (in this case Movement and Dance) from didactic perspectives. The syllabus contained, for example, the statement ‘the main theme of Movement and Dance includes movement communication where creation and exploration as didactical perspectives is the focal point’ (Swedish School of Sports and Health Sciences 2022, my translation). The teaching program is directed towards upper secondary school. Eleven students, six females and five males ranging in age from 22 to 28 and enrolled in their fifth and final year of the teacher education program, participated in the study. Moreover, the course was obligatory, but the teaching area was self-elected. Prior to participating in this course, the students had participated in three courses in sports didactics, where

creative dance was a minor part of the teaching content. Several students knew each other well, while the others did not. Two months before the course, I was given the specific time frame and schedule of the course. Seven lessons á 90 minutes were allocated to me within the time frame of nine days. The pedagogical unit took place during the COVID-19 pandemic. At the PETE institution where I conducted the study, teaching was permitted on campus during the study. Because the study took place during the pandemic, objects such as jump-ropes and hula-hoops were used with an aim to ensure physical distance during lessons. The materials were antiseptised, and soft textiles were machine washed between lessons.

To form manageable and relevant empirical material with the aim to explore how creative dance can be taught and experienced in Swedish PETE, video recordings and logbook reflections were produced. Relating to the video observations, the rectangular composition of the gym space required the two cameras to be placed in opposite corners to produce a general account of the activity taking place. The video recordings allowed repeated viewings of the lessons. The recordings comprised approximately 18 hours of film from the two cameras. On the morning of the seventh lesson, I felt somewhat feverish. Following restrictions due to the COVID-19 pandemic, I taught the students via Zoom Video Communications with my laptop connected to one of the students' laptops. The students participated in the gym at campus while I stayed at home. Due to the limited overview of what was happening during the lesson provided by the restricted video and sound capture, I chose not to record that lesson. For this reason, six of the lessons during the pedagogical unit were video recorded.

Video recording can provide insights into what is happening in the practice that is studied, as well as how it happens (Öhman and Quennerstedt 2012). Observational studies can provide first-hand impressions of ongoing practices that are not covered by other methods such as the interview method described above. At the same time, it is likely that the video recordings affected the participants in various ways, such as influencing what was said and done (ibid; Gunnarsson and Bodén 2021). Due to the video recording of two stationary cameras in opposite corners of the space and the quality of the audio recording, some of the reflections and discussions of the participants could be used as empirical materials in this study while others could not. If the pedagogical unit had been recorded with a handheld camera (Mattsson 2016) or with chest-mounted action cameras (Larsson et al. 2021), in combination with the stationary cameras, other empirical materials could perhaps have been produced.

Relating to the logbook reflections, during the first lesson the students received analogue logbooks in the format of A5 hardback notebooks. During each lesson the stu-

dents were given approximately 15 minutes to write reflections in their logbooks. The students were asked to reflect on questions relating to movement exploration in creative dance, for example, ‘write down one thing that you experienced during your movement exploration’. The amount of text produced in the logbooks by each PETE student varied from seven pages to 18 pages, with 133 pages of text being produced in total.

4.3.2. The cyclical process of the teaching

The structure of the teaching was inspired by the cyclical process to plan, enact, observe, reflect and revise that often underpins action research studies (Gunnarsson and Bodén 2021; Casey et al. 2018; Kemmis and McTaggart 1988). I planned the general structure of the pedagogical unit along with the content of the first lesson, while the content of the remaining six lessons was collaboratively determined, taught and danced by the students and me. Each lesson involved enacting and observing dance assignments followed by reflections and revisions of the assignments. During the revision phases the participants revised the teaching assignments according to the input from the students and me. Considering insights from the interview study, I chose to focus on teaching that provided opportunities for exploration, and the students were instructed to read relevant course material (Mattsson and Larsson 2020). The students’ reading generated discussions of how to work with teaching by which the students were given opportunities to explore movements that were not pre-determined. During the pedagogical unit I was inspired by Deleuze’s philosophy (1994, 2002) to pose new questions on ways of teaching. When I observed and revised assignments, I noted down some reflections about how I could be inspired by his philosophy. Pedagogical implications of how my teaching was inspired by Deleuze’s philosophy are discussed in Chapter 6.2.

All assignments during the pedagogical unit involved efforts to afford space for the participants to explore movement and to expand their movement experiences. Some assignments were planned and taught by the students themselves where the other students and I participated as learners, and some assignments were planned and taught by me (for examples see articles three and four). Overall, the revisions of the assignments were made by the participants in small groups during the lessons and by me in between the lessons. Sometimes I divided the students into smaller groups and at other times the students would form groups in regards of ideas they had picked up on from their reflections. In the revision phases, my main intention was to partake in their conversations as a mutual participant. The shared, reflective and cyclical process of planning, enacting, observing, reflecting and revising assignments continued throughout the seven lessons.

4.3.3. Abductive analysis

Article three is based on an abductive analysis of the empirical material produced in the pedagogical unit. The aim with the analysis was to explore how creative dance in Swedish PETE can be expressed and experienced by students. The process of analysis was similar to the abductive analysis of the interviews (see Chapter 4.2.3). Even if the process of analysis was similar and the collaborators were the same, the empirical materials were different and thus the analysis was unique (Gunnarsson and Bodén 2021).

The analysis was iterative and characterized by a systematic and collaborative process. We began by getting acquainted with the video observations and the students' logbooks. I viewed the video recordings in their entirety once and I read the logbooks of the students twice, while taking notes in a Word document. In the video recordings, I focused on the PETE students' verbal comments and body movements (as seen in Mattsson 2016). I did not transcribe the video recordings in their entirety, and my notes consisted of six pages of text. Taking notes involved a search for patterns, for instance noting themes I saw reiterated in the video recordings, such as movement imitation involving exploration, the students' ways of recurrently reflecting on experiences of responding to unpredictability and students' openness to engage with new and unfamiliar ideas and movement assignments proposed by peers. The notes were also made in a deductive manner, as they were made through the lens of the Deleuzian concepts palpation and experimentation. At this stage, my two co-authors read my notes and got acquainted with relevant parts of the video observations and the students' logbooks.

In the next step of the analysis, we created two AQs guided by the theoretical concepts palpation and experimentation and research question three (RQ III): What do PETE students express and experience when participating in mirror assignments during Swedish creative dance lessons and what insights can be made regarding creative dance teaching? The AQs were: 1) How do processes of palpating difference unfold in regard to the PETE students' participation in the subject tradition of creative dance? and 2) How do the PETE students speak, act and write in terms of what they express and experience when dancing by experimentation? Then, I viewed the video recordings and read the logbooks of the students in their entirety while thinking with the two analytical questions and taking notes. I returned to parts of the empirical material that seemed to be of particular relevance in consideration of the analytical questions. I noted for example, that the students' expressions and descriptions seemed to reflect an idea related to palpation (May 2005). I identified, and noted down, reoccurring moments in the empirical material where the students' expressions and descriptions reflected an ambiguity in relation to issues of movement expression. Such expressions, in relation to the mirror

assignments, were observed several times in the video recordings as well as reiterated in the descriptions in the students' logbooks. This came across especially, but not exclusively, in the empirical material of three of the students. Thus, I came to focus this analysis on empirical material from those three students. In addition to the movement between inductive and deductive approaches in the analytical process, I chose to analyze this empirical material in particular because of a sense of bewilderment or wonder I experienced when viewing the video recordings and reading the PETE students' logbooks (Andersson and Balldin 2022; Brinkmann 2014; MacLure 2013b). That which seemed indefinable for the students while mirroring each other's movements in pairs fascinated me. I was also uneasy by the expressions and experiences of strangeness and indetermination of the students. Perhaps, these sensations that I experienced were related to observing something unexpected and to do with a sense of uncertainty of how to handle empirical material that involved ambiguity. The Deleuzian scholar MacLure speaks of empirical material in terms of glow (2013a) and wonder (2013b), that they "do not just prompt thought, but also generate sensations resonating in the body as well as the brain" (2013a, p. 661). So, the choice of what empirical material to include in the analysis involved sensations of fascination and unease as well as analytical thought. Next, my co-authors read and commented on the notes. Then, in consideration of the theory and the two analytical questions, we sorted quotes into categories and identified sub-categories. As a last step, the writing up was also done by the sharing of thoughts, ideas and experiences. As I was the one with most insight into the empirical materials and the theoretical concepts, I most often initiated discussions and writings.

4.3.4. Post-anthropocentric and Deleuzian analysis

Article four is based on a post-anthropocentric and Deleuzian analysis of the empirical material from the pedagogical intervention study. The aim of the analysis was to explore how human and non-human materialities co-act in movement exploration in creative dance in Swedish PETE and the pedagogical implications in creative dance teaching.

This time I engaged in a different process of analysis compared to the abductive and iterative process worked with previously. The empirical materials were processed through a series of actions. My co-author and I began by reading texts by Deleuze, specifically on his philosophy of immanence, and from post-anthropocentric educational studies (Günther-Hansen 2020; Hultman and Lenz Taguchi 2010). We created two AQs guided by this reading and by research question four. The AQs were: 1) How do human and non-human materialities co-act in movement exploration in creative dance? and 2) What are the pedagogical implications when materialities constitute a significant part of

movement exploration in creative dance? Taking the AQs into account, we developed an instruction that I would bring with me when returning to view the video recordings. The instruction was to document sequences where human and non-human materialities seemed to constitute a particularly active part of the movement exploration and where unpredictability was prominent.

After that, I viewed the video material in its entirety. In this process, I chose two short sequences that were particularly conspicuous in relation to the instruction. I transcribed the video material that related to the two sequences, in terms of verbal statements, movements and actions in the room, into text. The transcription produced six pages of text. Next, to identify what kinds of human and non-human materialities constituted particularly active parts of the movement exploration, I highlighted the words involving materiality, for example the words 'hula hoop', 'body', 'blindfolds', 'arm' and 'floor'. Then, my co-author and I read the transcripts and viewed the selected parts of the video materials several times followed by discussions of the selected sequences in consideration of the AQs and the concepts materiality and assemblage from Deleuze and the post-anthropocentric educational studies. The literature, for instance Hultman and Lenz Taguchi's (2010) study on how materialities can coordinate with one another during children's play, contributed with a vocabulary that drew attention to details of agential materialities in the movement explorations, including questions of how and when explorations occurred. I began paying attention to how materialities such as muscles, plastic and the wooden floor affected one another and generated movement in the space. When writing the analysis, we returned several times to the transcription as well as to the video material and slowed down the video sequences to make visible the multitude of movements and materialities that the empirical materials offered (Gunnarsson and Bodén 2021). Similar to the two preceding co-authored articles, the process of writing up was done collaboratively where I most often initiated discussions and writings.

Some scholars have proposed that a posthumanist approach appoints a one-sided focus on materialities in a way that pushes discourses and human beings to the sidelines (ibid). It risks giving materialities an exceptional position and ignoring other potential aspects. From my point of view, this would constitute a genuine problem if numerous studies in the research area on creative dance would have had agential materiality as a main research interest. Yet, this is not the case.

4.4. My role as a researcher

Becoming a researcher is a relational process, as in my case together with, for example, the participants in the two studies, the research communities I participated in, Deleuzian concepts, and the laptop I have borrowed from my institution to write this thesis. When I write about empirical material, I am not assuming that data are things out there (objects) that can be collected by an independent researcher (subject) (St. Pierre 2023; Gunnarsson and Bodén 2021). I am always part of the reality that I wish to make claims about (related to the concept of entanglement, Barad 2007).

Considering my experiences of working with dance in a professional artistic context and with creative dance teaching in several educational contexts prior to the study, creative dance became the focus of my thesis. Furthermore, through participation, for instance by interviewing and co-teaching, I as a researcher affected the practice and simultaneously became affected by it. For example, I most likely affected the reflections of the interviewees during the interview study. As the interviewees knew that I had knowledge and experience of creative dance teaching they seemed to become engaged and provided in-depth descriptions about teaching creative dance. Simultaneously, there might be a risk that the interviewees offered descriptions of their teaching practices that they regarded beneficial to remain a respected colleague and potential future collaborator. Further, even if the structure of the interviews was flexible with the intention of giving both the interviewees and I an openness to ask new questions and address aspects that could not be predicted in advance, it was anticipated before and during the interviews who was expected to ask questions (interviewer) and who was supposed to answer them (interviewee). In other words, stable power relations were reiterated throughout the interview study. This signals that the study might have missed accounting for reflections that could have been made if the power relations were negotiated before and/or during the interviews.

My role as a “practitioner researcher” (Casey et al. 2018, p. 8) during the pedagogical intervention study also likely affected the production of the empirical material. My experience of participating in dance lessons as a student, and of teaching dance, in arts education and of teaching in PETE likely affected the production. For example, it might have influenced my ability to encourage the students to engage in the dance assignments. It might also have impacted on the way I revised dance assignments during the pedagogical unit. Having participated in and taught mirror assignments numerous times before likely inspired me to explore new ways to teach such assignments. Furthermore, sometimes I participated in the dance together with the students. My participation in the

dance likely affected the students' engagement in the dance, both in terms of limiting and encouraging their engagement. Also the ways of letting philosophy inspire the teaching assignments was partly a product of my interest in, and time spent, reading philosophy prior to the study. In addition, I aimed to partake in the conversations of the students as a mutual participant. Relating to my role as both the students' teacher during the pedagogical unit and the researcher of the study, I noticed that some students shared ideas more vividly when I did not partake while other students engaged more in conversations when I attended the groups. Moreover, considering the literature review study, my seven years of dance teaching experience in Swedish PETE might have motivated my choice to include the existing literature on creative dance from the syllabuses from the Swedish PETE institutions.

Each new article of my thesis has been a product of engaging with concepts I had not engaged with previously, new empirical materials, comments and writings of co-authors and of commentators of the texts during seminars and readings of previous studies of creative dance. For instance, during the analytical process of the empirical material presented in article four, I became aware of how my thinking pre-assumed a human-centeredness and the process opened up ways to think beyond my habitual ways of doing analysis. The research as well as I as a researcher developed concurrently.

4.5. Ethical considerations

In this doctoral project, the ethical considerations have mainly concerned obtaining a good research practice and meet the ethical requirements by the Swedish Research Council (2017), but also to align my ethical concerns with the theoretical approach that have guided my studies.

A research process entails ethical considerations since it involves an active making of reality. Since research likely affects the ones participating an ethical responsibility is formed (Gunnarsson and Bodén 2021). Ethical considerations are matters of finding balance between interests, such as between the quest for new knowledge, individual privacy interests and protection against various forms of harm (The Swedish Research Council 2017). Regarding the requirement of information and consent, all participants have been informed of the purposes of the studies and that their participation is voluntary, both in an oral and written form, and written contracts of consent have been given and signed in writing by both the researcher and the participants. During the pedagogical intervention study, I was particularly mindful of potential injuries of the participants.

Prior to the study, staff and medical facilities were identified in case of injury. Moreover, recordings and teaching assignments would have been stopped if deemed necessary. Concerning the requirement of confidentiality, the data are reported according to GIH guidelines of DMP (data management plan) and stored in a safe storage (GIH drive NextCloud). The participants have been informed that the empirical materials are stored in a safe storage, that the materials are not allowed to be used in any other research project and are protected against unauthorized persons partaking of the information. During the pedagogical intervention study, digital documentation, in the form of recording video and writing notes by means of the participants' smart phones and a private Facebook group, was employed for teaching purposes with an aim to provide further space for observation and reflection. As this documentation was not intended for research purposes, the digital material and the Facebook group were deleted in full after the course. In addition, relating to the requirement of anonymizing, the interviewees nor the students' real names have not been used when transcribing the empirical materials. In terms of potential risks to identify participants and attempting to maintain their anonymity, any information that could lead to identification was carefully considered and omitted from documents intended for publication.

My interest in Deleuze's work has also guided me in questions of ethics. Johansson and Hall (2019) outline a proposition of a Deleuzian ethology based on Deleuze's reading of Spinoza that they call a *research ethics of becoming*. Johansson and Hall develop their ideas from the philosophical assumption that there is no presupposed hierarchy between different substances of the world. Here, ethical questions concern whether or how, for instance, a researcher and research participants affect, and become affected by, each other. A Deleuzian ethology also problematizes the notion of value neutrality in research ethics. As stated by Johansson and Hall, value neutral science, that cultivate a dualism between the researcher and the objects of research, provided a platform that was appropriate for the Enlightenment's autonomous human being and in the aftermath of World War II. It illustrated the importance of fostering human rights politically as well as in science. In light of the theoretical approach in my thesis by which I have reiterated the ideas of the reciprocal dependency of all matter and that knowledge production takes place amidst a researcher's dependency of the world, I do not state that my research is value neutral but rather performative (Gunnarsson and Bodén 2019). Here, the research process becomes an active making of reality and, consequently, needs to include ethical considerations. Thus, it became important for me to describe several ways by which the empirical materials and I as a researcher affected one another during the research process, as done in the previous part of the chapter.

4.6. Trustworthiness and quality

Trustworthiness concerns producing research that offers explicit and transparent descriptions of how the knowledge has been produced (Gunnarsson and Bodén 2021). This description is in line with principles of trustworthiness stated by The Swedish Research Council (2017). Research projects based on empirical material should formulate clear arguments and should exhibit clarity, order and structure. With the intention of making my research trustworthy I have provided detailed descriptions of the research process, making it possible for the reader to thoroughly follow the planning, procedures and analyses. These descriptions are written in a manner so that both the participants of the research and potential future readers can reach an understanding about the choices that I as a researcher have made. Furthermore, I have given an account for how changes can affect the ways in which I as a researcher approach the study. One example here is the account given to the adjustments made during the pedagogical intervention study considering my illness during the seventh lesson and restrictions due to the COVID-19 pandemic, that affected the production of empirical material.

A further sign of the quality of the thesis includes the ways I have rigorously selected and employed research methods, formulated research questions, generated empirical materials, conducted analytical processes, and engaged with a theoretical approach that I, in dialogue with my supervisors, have considered suitable and contributive to the purpose of the doctoral research project. It is also worth noting that my experience of teaching creative dance brings with it habits and patterns of interpretation. With an ambition to gain insights that would likely reach beyond my habits and patterns of interpretation, I chose to co-author the articles based on two of my studies (see articles two, three and four) and to have all four articles (three published and one unpublished) in the thesis been scrutinized by different research groups at my own university and other universities, as well as by colleagues experienced with creative dance teaching in PETE. Equally important was to be attentive and open to the empirical material and the new theoretical approach I have encountered. An example of how I have done this is when engaging with the theretofore unknown post-anthropocentric approach in the analysis in article four.

The samples of the interview study and the pedagogical intervention study were chosen with regards to the richness of the empirical material (Smith and Sparkes 2019). As stated, each participant in the interview study was primarily responsible for dance education at their respective PETE institutions and could provide substantial descriptions relevant for my aim. The teaching area in the PETE course chosen for the intervention

study was dance, with a particular focus on creation and exploration. Although the sample of eight teacher educators who participated in the interviews and the eleven PETE students in the intervention study was relatively small, it was still large enough to contribute with a rich understanding in light of the overall aim of my thesis (ibid). Writing the thesis, I have aimed to facilitate transferability of the findings (Smith 2018). My aim has been to provide vivid descriptions and writing accessibly so that readers can see how findings from the thesis can overlap with their own situations. The detailed descriptions of the research process enable readers to gain an understanding of the work and thereby make possible comparison of my work with other situations (also see Shenton 2004). The findings from the analyses of the empirical material provide insights into the specific context of creative dance teaching in Swedish PETE. Teaching creative dance in PETE is done in other geographical contexts than Sweden under similar conditions (for example similar class sizes and student characteristics). Thus, the pedagogical considerations in the articles might very well be relevant for other PE teacher educators working with creative dance.

5. Summary of the articles

Article I (unpublished manuscript)

Creative dance teaching in physical education and physical education teacher education
- a narrative review

The aim of this study is to explore how different theoretical approaches are used in studies of creative dance teaching in PE and PETE.

A literature review inspired by the methodology of a narrative review is adopted that enables me to summarize, compare, explain and interpret research relevant to my aim. From the three databases Discovery, SportDiscus and ERIC, and the existing literature from the syllabuses from Sweden's eight PETE institutions, 33 peer-reviewed empirical studies of creative dance in PE and PETE were identified and analyzed.

Overall, the 33 studies offer a rich insight into the contributions that creative dance teaching can make to movement education when it comes to experiences of movement and relational aspects of movement. The studies show that there is an ongoing discussion about what creative dance teaching in PE and PETE can be today.

Moreover, the findings show that a majority of studies have made explicit which theoretical concepts were used in their work and that the most commonly considered theoretical approach was phenomenological. The findings show further that very few studies engage with critical questions of gender, disabilities or class, and that no study works with a posthuman approach.

The conclusion is that various theoretical approaches are used to guide scholarly work and to develop questions that are relevant to explore in order to gain further understanding of creative dance teaching in PE and PETE.

Article II

'Free but not free-free': teaching creative aspects of dance in physical education teacher education

The purpose of this article is to create insights into how PETE teacher educators understand creative aspects of dance in their educational practice. To answer this aim, we explore how teacher educators describe their teaching of creative aspects of dance. The empirical materials are generated through a qualitative interview study with one PE teacher educator from each of the eight PETE institutions in Sweden (n = 8). The analysis of the empirical materials is inspired by Deleuzeguattarian theory.

The findings indicate that the PE teacher educators do have quite specific ideas concerning creative aspects of dance. The findings of the study show that teaching creative dance can take teaching in PE and PETE in new directions alternative to principles that privilege sport skills and physical exercise. Teacher educators expect learners' actions to be produced through processes of movement exploration, and not by performance of correct or incorrect movements.

Furthermore, the findings suggest that creative dance provides dance education in PE and PETE with other possible educational values by emphasizing creative movement learning through which students learn to accommodate new and unpredictable situations. The findings also show how teaching creative aspects of dance can be practiced through various striated spaces that both limit and provide ground for momentary passages of smoothing in creative dance teaching.

Article III

Dancing as searching with Deleuze – a study of what students in physical education teacher education express and experience in creative dance lessons

The purpose of this paper is to create insights into what PETE students express and experience when participating in mirror assignments during creative dance lessons in Swedish PETE. To address this aim, we explore PETE students' participation in creative dance and what happens when spaces for exploration of movement processes are at hand in dance teaching in PETE. To do this, empirical materials were generated through a pedagogical sequence of creative dance teaching with a teacher/researcher and students at a Swedish PETE institution. The theoretical concepts of palpation and experimentation (May 2005; Deleuze 1994) were used to guide the analysis of how the PETE students operate in spaces of exploration in creative dance.

The findings of this study show three ways of operating in spaces of exploration relating to what the students express and experience in creative dance in PETE, labelled as: (a) moving in spaces of unpredictability; (b) almost dancing, and; (c) serving as a vehicle of the dance. The findings show alternative ways of understanding what can happen when

students operate in spaces of exploration during creative dance lessons. They also suggest that the movement experiences students gain when operating in spaces of exploration are never fully possible to predict.

In summary, we show how creative dance teaching can offer PETE students opportunities to experiment with movement. Our findings can help researchers and teacher educators understand PETE students' experiences of engaging in exploratory processes in PETE, and how these experiences can be used in teaching of creative dance.

Article IV

Exploring movement in creative dance: Introducing 'dancemlage' in physical education teacher education

This paper explores how human and non-human materialities constitute part of exploration of movement in creative dance lessons in Swedish PETE. It also explores the pedagogical implications when materialities constitute a significant part of movement exploration in creative dance. Our methodological point of departure is a pedagogical unit in creative dance in PETE in which students and a teacher collaboratively explored movement and movement assignments.

The analysis is informed by Deleuze's concepts assemblage and materiality and by educational studies with a post-anthropocentric approach, some of which build directly on Deleuzian theory. The analysis involved documenting sequences, that we defined 'dancemlages', where human and non-human materialities seemed to constitute a particularly active part of the movement exploration and where elements of unpredictability were prominent. The main focus of the analysis is the movements of human and non-human materialities. Thereby the focus is not the experiences of students and teachers, or the objects such as the hula-hoops and blindfolds, as often seen in educational sciences traditions.

The findings are presented as two 'dancemlages': *Dancemlage no 1: muscles-gravity-floor-plastic* and *Dancemlage no 2: textiles-friction-forehead-wood*. The findings show how materiality can be analyzed in the context of creative dance. They also suggest ways to bring about materiality-aware teaching in PETE whereby creative dance teaching becomes a task of paying attention to what human and non-human materialities are affording movement exploration.

6. Discussion

In this chapter, I discuss the findings from the three studies presented in the four articles (three published and one unpublished) in light of the overall aim of my thesis; to explore how creative dance in Swedish PETE can be taught and experienced. I will provide reflections as to how my studies and findings relate to each other and to previous research, in consideration of the overall aim. Furthermore, I discuss how the findings can be further understood with the help of the theoretical approach presented in the thesis.

I start by discussing insights relating to creative dance teaching from the interview study presented in article two. Thereafter, I discuss insights relating to creative dance teaching from the pedagogical intervention study presented in articles three and four. A discussion of my findings from the literature review is included in these two parts of the chapter. The discussion ends with conclusions, reflections on limitations of the research and suggestions for further research.

6.1. Experimentation in creative dance teaching

An insight gained from the interview study is that PE teacher educators have specific ideas about creative aspects of dance and about teaching creative dance. When they described what PETE students are occupied with during creative dance lessons, they often referred to it in terms of exploration. They described ways of teaching that seem to connect to the specific challenges that they have identified during their teaching in PETE. Several teacher educators stated that most of what they teach is new to the students. These findings paint a similar picture to Rustad (2012) and Ørbæk (2018), who claim that many students engage with creative dance for the first time in PETE. I illustrate with the findings that PE teacher educators think that it is important to teach PETE students in ways so that they experience and explore creative dance themselves in a safe learning environment, rather than supplying them with recommended methods to use when teaching school pupils in PE. These findings add weight to Rustad's (2017) claim

that as PETE students have limited or nonexistent experience of dance it is reasonable that they are offered opportunities to experience dance as a support for their own teaching.

The teacher educators describe that some PETE students feel discomfort and fear when taught creative dance, as also can be seen in previous studies (Heikkinen and Mattsson 2022; Ørbæk 2021). The findings show that to express themselves through movement can be challenging for students. Thus, I paint a similar picture to Heikkinen and Mattsson (2022), who add that the PETE students' feelings of discomfort can be due to social norms. In addition to previous research, I show that feelings of discomfort and fear likely relate to students' expectations of what it means to learn to dance, in light of the official prescriptions of PE (The Swedish National Agency for Education 2022a, 2002b). The findings also show that such feelings likely relate to the students' expectations of dance involving correctness of technique or notions of right and wrong movement performances. Expectations of 'what counts' as dance in PE and PETE can be considered as striations that structure the students abilities to engage in experimentation. Acknowledging Deleuze's idea of the reciprocal relationship between striated and smooth spaces, the above mentioned striations are not fixed but can continuously be opened up to "momentary passages of smoothening" (Rosenlund Hansen, et al. 2017, p. 242). Creative dance teaching can be said to provide such passages, or "'smoother' space to experiment within" (Landi et al. 2016, p. 8) where students are invited to experiment with how dance might become something else than what they expect.

The PE teacher educators stated that inviting the students to share feelings and conceptions of dance is one way to create an environment for possible experimentation. For example, some teacher educators describe that the students open up through dialogue and listen to others about worries they can have in face of creative dance teaching. These findings support Heikkinen and Mattsson's (2022) and Ørbæk's (2018) claims of how reflection and dialogue can be ways to engage students and invite them into exploratory dance assignments. Furthermore, although the exploratory dance assignments can be said to involve processes of improvisation (e.g. Ravn 2014), the teacher educators rarely described their teaching in terms of improvisation. One teacher educator even stated that he or she uses the word exploration rather than improvisation because the latter holds negative 'charged' connotations with the students.

I also show that PE teacher educators perceive that it is important for PETE students to spend time with exploratory processes without necessarily settling on something, such as the creation of specific movement compositions to perform. These findings add weight to Murelius and Henriksson's (2022) claim that experimentation is important

during creative dance lessons, as it can provide a space alternative to pressures of performance that school pupils and PETE students can feel. This suggests that spaces alternative to those that potentially produce pressures of performance can be said to be defined by indetermination.

Four factors of creative dance teaching in Swedish PETE are identified in the descriptions of the PE teacher educators: providing guidance and safety, articulating frames clearly, the relevance of letting students depart from known and familiar movement experiences, and playfulness. These factors have also been highlighted in previous studies both in PE and PETE. Thus, these insights can be relevant for PE teachers in school as well as for PE teacher educators. As in Ravn's (2014) and Chappell's (2007b) studies, these findings suggest that teaching involves guiding the students by providing a learning environment where they can feel safe to engage in situations unknown to them. The notion of PE teacher educators as guides for the students adds weight to the ideas about the teacher educator as a sounding board who does not provide predefined movement material (Ørbæk and Engelsrud 2021; Mattsson and Larsson 2020; Torrents et al. 2013). The findings support Larsson and Karlefors's (2015) observations when they claim that PE teachers who teach creative dance can be regarded a supervisor, facilitator and a critical friend. When teaching creative dance, the PE teachers often "hand over the assignment to the students and then 'wait and see' what they come up with" (p. 584).

The dialogical, reactive end of Chappell's 'pedagogical spectra' comes across several times in the interview study. The teacher educators' descriptions of various strategies to approach the students with care and patience suggest reactive interventions in teaching. These findings show that the teacher educators lay particular emphasis on the idea that experimentation in dance teaching sometimes takes time. Chappell (2007b) also makes a similar remark about teaching becoming more time-consuming when movement exploration is initiated by the pupils themselves. From my interview study, the importance of letting teaching take time is highlighted, a) when students struggle with leaving their comfort zone, and b) when experimentation is foregrounded before particular movement outcomes. The PE teacher educators also stated that a lack of time allocated to dance within their PETE programs inhibited their teaching of creative dance. Time constraints seem to make teacher educators only able to introduce creative dance to students without necessarily making them acquainted with the teaching area. The lack of time is problematic in view of Rustad's (2017) contention that for PETE students to gain knowledge in dance and dance teaching requires time and effort. More time allocated to creative dance in PETE, whereby PETE students can be offered ways

to build confidence in teaching creative dance, might lead to future PE teachers feeling increasingly confident to teach creative dance in PE.

On just a few occasions, the teacher educators' descriptions of their teaching seemed to align with the proactive end of Chappell's (2007b) 'pedagogical spectra'. For example, teaching can be considered proactive when the teacher educators describe how they move close to the students and provide constructive feedback during the students' experimental processes by offering various movement ideas. The teacher educators do not seem to give an account of teaching defined by an "apprenticeship with tight parameters" (Chappell 2007b, p. 50), whereby a teacher provides pupils with movement vocabulary to make them gain confidence, or with visual demonstrations as with the kinetic model of teaching identified by Torrents et al. (2013). Given that my thesis shows that most creative dance teaching in PETE is new to the students, it is worth noting Chappell's and Torrents et al.'s claim that proactive intervention in teaching can be useful, especially for inexperienced students. The findings from the study add weight to Chappell's (2007b) claim that proactive intervention in creative dance teaching might well be an overlooked strategy and that the reactive end of the spectra seems to be more commonly considered.

Furthermore, the findings from the interview study show the relevance of providing clearly articulated frames in teaching to invite – several of the PE teacher educators used the verb 'to trick' – the students into experimentation. This adds weight to Ravn's claim of the importance to teach with "concrete movement setup[s]" (2014, p. 92, my translation). Ravn states that it is possible to teach creative dance with open and more abstract assignments, yet that requires that students are vastly experienced with dance. As I have stated, and as observed in other studies (Heikkinen and Mattsson 2022; Rustad 2012), PETE students often lack experience of creative dance. Ørbæk (2021) observes that if creative dance assignments become too open, or "too broad" (p. 8), PETE students can gather in clusters with fellow PETE students and stand still to gain safety, rather than engaging in exploratory assignments. Thus, open and abstract assignments during creative dance lessons are unlikely to benefit teaching concerned with guiding students as they leave their comfort zones. Rather, the findings suggest that assignments ought to be structured and clearly articulated to encourage students to be open to experiment with dance, potentially disrupting the striated space of expectations of 'what counts' as dance in PE and PETE.

In view of PETE students' perceptions that to participate in creative dance lessons requires courage (Lundvall and Maivorsdotter 2010), teaching with clearly articulated frames can be one way to inspire students with courage. The use of theoretical move-

ment frameworks, prominently that of Laban, and of music, were highlighted by the PE teacher educators to provide frames for students to make the students not feel too uncomfortable during lessons. The acknowledgement of Laban's movement framework in creative dance teaching supports Ravn's (2022), Ørbæk's (2021) and Neville and Makopoulou's (2021) contention that this framework remains valuable in creative dance in PE and PETE. The notion that music is significant in creative dance teaching adds weight to Heikkinen and Mattsson's (2022) and Mattsson and Larsson's (2020) claim that music impacts on how school pupils and PETE students engage in movement exploration. I will come back to a discussion about the impact of music in creative dance teaching at the end of Chapter 6.2. The interviewed teacher educators do not highlight the use of metaphoric images when they describe various frames provided to the students, which is worth noting given Torrents et al.'s (2013) observations of the potential benefits of including this in teaching creative dance with inexperienced students.

The PE teacher educators' descriptions indicate that they often teach "inside out" (Chappell 2007b, p. 46-47). This means that they acknowledge the students' movement experiences and interests when inviting experimentation without prescribing particular outcomes. In other words, the teacher educators did not describe their teaching in terms of teacher-initiated demonstrations with relatively pre-determined outcomes, defined as working "outside in" (ibid). In my literature review, the relevance of letting students depart from known and familiar movement experiences is also highlighted. In alignment with, for example, Mattsson's (2016) study in the context of PE, the literature review suggests that the students' previous movement experiences and everyday movements can be considered resources in creative dance teaching. In Deleuzian terms, what is known and familiar to the PETE students enters into the realm of experimentation. The students' movement experiences can be understood in terms of 'expérience' in dance, to borrow Deleuze's word with its double meaning of experience and experimentation. Creative dance teaching can be said to invite experimentation of what students' movement experiences and everyday movements *might become* (May 2005).

Moreover, the interviewed PE teacher educators highlighted the relevance of play in their teaching, supporting Rustad's (2013) contention of play as central to dance teaching in PETE. While sometimes play in teaching is considered in terms of using specific kinds of games (see e.g. Frisk and Karlsson 2022; Lundvall and Meckbach 2012), the findings from the study emphasize the idea of a playful approach in teaching. A playful approach in teaching was considered as, for instance, creating environments where the students feel that all movement expressions are allowed, that encourages students' experiences of joy and reduce performance pressure. These findings relate to what all the PE

teacher educators maintained, of the importance of letting movement outcomes remain indeterminate to the students, as well as to the teacher educators, during experimentation. The relevance of play in creative dance teaching highlighted in the findings is in accordance with how Ørbæk and Engelsrud (2021) describe teachers who demonstrate silly and weird ways of moving to invite an environment involving an acceptance of failure and with Chappell's (2007b) depiction of dance teaching that encourages students' experiences of joy, silliness and mess. A playful approach in teaching was further explored in the pedagogical intervention study, discussed next.

6.2. Experimentation, experiences and dancemblages

I now turn to the findings from the pedagogical intervention study presented in articles three and four. This part also includes further discussions of the findings from the literature review as well as from the interview study.

Mirror assignments are sometimes part of creative dance teaching both within and outside of the context of PE and PETE (Ørbæk and Engelsrud 2021; Ørbæk 2018; Gilbert 2015). A *first insight* from the intervention study is that inspiration from Deleuze's philosophy can support and extend ideas about teaching movement imitation by means of mirror assignments in PETE. My teaching of the mirror assignments during the pedagogical unit was inspired by Deleuze's philosophy and based on insights from the preceding interview study. My thesis supports Ravn's (2014) contention that movement imitation can be regarded a way to invite movement exploration. During the interview study, a few PE teacher educators mentioned their use of mirror assignments in their creative dance teaching. They did not provide further descriptions of teaching such assignments but stated that they were employed either to create a space where the students' participation in creative dance lessons felt safe or with a purpose for warming up before other dance assignments. One of the teacher educators defined the mirror assignment in terms of a 'classic assignment'. This could indicate that such assignments are often used in creative dance lessons in Swedish PETE or could refer to that the assignment is historic as it was developed by Konstantin Stanislavski in the early 1900s.

During the first three lessons, I considered how Deleuze's view of the world as indeterminate and in constant process and movement (Deleuze 1994, 2002) could inspire thoughts on how to revise this 'classic assignment'. Mirror assignments are often carried out with students dancing in pairs, facing one another where one of the students is moving while the other mirrors the movements (cf. Ørbæk 2018). This specific assign-

ment was taught during the first lesson of the pedagogical unit during the intervention study. The findings from the interview study propose that PETE students are invited to experiment, in other words, to spend time with exploratory processes without necessarily settling on something, such as specific movement compositions to be performed. Their emphasis on experimentation, together with a conceptual attention to indetermina- tion and process, inspired me to pay attention to indetermina- tion in movement during the assignment, rather than engaging with a striated space of, for instance, well-known movements, pre-determined steps of dance forms, or specific movement compositions. With this in mind, the students were invited to engage in a smooth and open space by being asked not to pre-determine who was leading or mirroring the movements but to focus on each other and mirror what they see. To provide a focused learning space for the students so that they could be attentive to the numerous shifts and movements during the assignment, they were asked to make it impossible for an observer to determine who was initiating the movements and who was mirroring.

I was again inspired by process and indetermina- tion (Deleuze 1994, 2002) when re- vising the mirror assignment further. When considering the “creative source” (Chappell 2007b, p. 46) in the mirror assignment, I chose to employ video recorded dances unfa- miliar to the students, that were based on exploration and that had not been created to be reproduced. To further highlight the indetermina- tion of the assignment, the video rec- orded dances were presented to the students while dancing, and were not introduced or viewed earlier during the lessons. When Deleuze’s philosophy was used to inspire crea- tive dance teaching in Swedish PETE, three of the factors identified in the interview study seem to remain important, while one does not. Providing guidance and safety, articulating frames clearly, and playfulness seem to continue to be significant for crea- tive dance teaching. However, relating to the idea of teaching resources identified in the literature review as well as to the notion of teaching “inside out” (Chappell 2007b, p. 46-47), the relevance of letting students depart from known and familiar movement experiences is not highlighted in the findings presented in article three. These findings suggest that experimentation in teaching can mean to include stimuli derived from inde- terminate movements of others.

Following insights from the interview study, I acknowledged that some of the PETE students might experience discomfort when entering the creative dance lessons, as ob- served by the PE teacher educators. It became important to communicate clear frames in the assignments and recognize the aspect of playfulness, in terms of teaching in ways whereby the PETE students hopefully would not be afraid to make mistakes and not be worried about their performance. This meant to recognize the reciprocal relationship

between determining clearly structured assignments and offering spaces for experimentation. Also following from insights from the interview study, it was important to provide a learning environment where they felt that all movement expressions were allowed. These pedagogical considerations aligned well with what Ravn (2014) regard important when teaching improvisation in dance: a) make the group feel safe so they will dare to do mistakes, b) employ a concrete movement setup, and, c) try to create an environment where everything is possible. Moreover, in terms of ‘proximity and intervention’ in teaching, the findings presented in article three indicate that I as a teacher taught in a way that was aligned with the dialogical, reactive end of the ‘pedagogical spectra’ (Chappell 2007b), and with a praise-based democratic approach. This is indicated by my ways of co-participating in the assignments together with the students and expressing appreciation for their participation. The PETE students’ descriptions in their logbooks show that my engagement as a co-participant in the assignments inspired the students to engage in the assignments. These findings support Ørbæk (2021) observation that school pupils who were uncomfortable during a creative dance lesson did not dare to “‘let go completely’ when the teacher stood and ‘observed and assessed’ their movements” (p. 329). I show with the findings that by having the teacher ‘let go’ in the dance assignment together with the students as a ‘co-experimenter’, where no one is observing them, can provide a safe and encouraging space for experimentation. Furthermore, the empirical material from the pedagogical intervention study also suggests that reflections and discussions can be relevant in creative dance teaching, as seen in the interview study and in previous studies (Heikkinen and Mattsson 2022; Persson and Arvidsson 2022). As in Ørbæk’s (2018) study, these findings suggest that providing opportunities for discussion amongst students can develop new ways of teaching. This was observed in particular when the students collaborated in groups to revise assignments.

A *second insight* from the pedagogical intervention study is that teaching mirror assignments in creative dance lessons in Swedish PETE inspired by Deleuze’s philosophy can result in students’ expressions and experiences involving indetermination. Before discussing this second insight further, I will present a finding from the literature review that will inform the discussion below. The review shows that the most considered theoretical approach in studies of creative dance in PE and PETE was phenomenological. Phenomenologically oriented scholars highlight kinesthesia and emphasize sensorial awareness in dance, such as feeling the energy of the body and being able to sense movements from within (e.g. Ravn 2020; Chappell 2007b). The emphasis on embodied experience in movement in creative dance can likely be traced back to the aesthetic forms of female gymnastics that developed in the early 1900s in the PETE programs in

Sweden and elsewhere, where movement was characterized by an individual embodied awareness and where an acknowledgement of experiencing the feelings of performed movements was highlighted (Lundvall 2015a; Lundvall and Schantz 2013).

My analysis in article three, of what the PETE students expressed and experienced while dancing, was based on the mirror assignments outlined above. As in Ørbæk's (2018) study, the findings suggest that students can experience a closeness to each other when participating in mirror assignments in creative dance lessons in PETE. While cognizant of the study design based on a small sample in a short pedagogical intervention, the findings suggest that PETE students' attention to their movements while moving – i.e. to do with kinesthesia – involves indetermination. During the assignment where the PETE students explored a mirror assignment in pairs while facing each other, some described that they experienced that they were unable to predict the movements. This was also noted by students observing the assignment. By observing the video material and reading the students' logbooks, it was also unclear at times who was leading and who was mirroring. The findings suggest that how their movements are experienced by themselves, as well as by others, can involve indetermination, in particular when their movements are performed slowly, are less complex and when the students are familiar with each other. I also suggest with the findings that the students can experience a dependency of their own movements to those of others when participating in mirror assignments. For example, some students experience that the movements are performed both by themselves and their peers simultaneously. With a phenomenological approach, Ørbæk (2018) suggests that students engage in "co-movement" (p. 44, my translation) in mirror assignments whereby their bodies seemingly extend into each other. This indicates that the students can experience each other's abstract movements within their own bodies. With a Deleuzian approach (Deleuze 1994) to these findings, the inside point of view of a mover when experiencing movement in PE, for example acknowledged by Arnold (1979), might be said to comprise of experiences relating to something indeterminate in-between bodies.

The assignments where the PETE students explored mirroring video-recorded dances seemingly generated an enjoyable, lively and messy dance. The results show that the students can experience that they are not in control of their movements, and that they cannot predict how they will move during the assignments. This results in students' eerie and perturbing expressions of movement and experiences of serving as vehicles for unpredictable movements. As in Rothfield's (2017) study, these findings suggest that the PETE students, while participating in mirror assignments, can be provided opportunities to experiment whereby they can only get a sense of what was going on.

Their expressions and experiences can be seen as products of how the students' focused immediate and close attention to the improvised and unpredictable movements they were assigned to mirror.

Moreover, it is worth noting that although their expressions and experiences during the creative dance lessons involved strangeness and unpredictability, the findings do not show signs of students feeling uncomfortable or afraid. Reasons for this might be several: a) the students ranged in age from 22 to 28 and were enrolled in their fifth and final year of the teacher education program, thus not being for instance in adolescence (Steinberg and Steinberg 2016) and were potentially comfortable with the environment, teachers, their peers, and with the teaching content to a certain extent, b) the teaching was collaborative, where the students and I co-taught and co-participated in the assignments, which might have affected their experiences of participating during the lessons, c) when I revised and taught assignments during the intervention, I had considered the insights gained from the interview study, of ways to create a safe learning environment for experimentation, that also might have affected them.

A *third insight* from the pedagogical intervention study is that a post-anthropocentric and Deleuzian approach can be seen to expand previous studies of materiality in creative dance teaching in PE and PETE. Studies have shown, outside of the context of PE and PETE, how material objects can provide opportunities for students' and pupils' development in creative dance (see e.g. Gilbert 2015). In the context of creative dance teaching in PE and PETE, studies have shown how material objects such as balloons and scarves can extend students' experiences of moving (Frisk and Karlsson 2022; Heikkinen and Mattsson 2022; Mattsson 2016). These studies indicate a distinction between experiencing subjects and material objects. The findings from my post-anthropocentric and Deleuzian analysis can open up considerations of how creative dance lessons involve a variety of co-constitutive and co-dependent human and non-human matter in movement (Ceder 2019; Johansson 2017). The findings presented in article four show how human and non-human materialities afford capacities for affecting and being affected (Deleuze 1988; Hultman and Lenz Taguchi 2010). In other words, they show how materialities, in a broad sense of the word, *do* things. The findings illustrate how human and non-human materialities mold, lift, generate speed, choreograph, readjust, bend, and rotate.

The findings from the post-anthropocentric and Deleuzian analysis illustrate how creative dance teaching can be thought of as a task of paying attention to 'dancemblages'. This means to teach with an awareness of what unpredictable movements of human and non-human materialities are affording experimentation. These findings add weight

to Hordvik et al.'s (2019) claim that assemblages of various human and non-human elements shape teaching. This approach to creative dance teaching suggests that it is not only students' expressions and experiences that involve indetermination but also the movement of human and non-human materialities. With the findings, my co-author and I extend what, for instance, Lundvall and Meckbach (2012) define as the unexpected and surprising elements of creative dance teaching to include human and non-human materialities. In article four, we specifically identify the danceblages *muscles-gravity-floor-plastic* and *textiles-friction-forehead-wood*. The materialities that make up the danceblages constantly change directions, for instance as they readjust, twist or slide, and they are assembled only momentarily (in the analysis only for a few seconds). This indicates an idea of an open, smooth space in creative dance. At the same time, the movements and directions depend on the striated space of the particular materialities that structure the possibilities of movement.

In addition, the findings show how the students engaged with music during the lesson. In one of the assignments, two of the students began performing steps they likely had danced before to a pop-song that they seemed to be familiar with, to then shift to an experimentation involving several human and non-human materialities. These findings add weight to Mattsson and Larsson's (2020) claim that by including music that is familiar to students can inspire them and help them deal with feelings of discomfort involved in participating in creative dance lessons. The findings from my study show that the pop-song, likely familiar to the students, continued to play during the dance assignment, but the students abandoned what seemed to be a reproduction of a well-known dance form, to begin experimenting with what we identified as the danceblage *muscles-gravity-floor-plastic*. This suggests that the music seemingly familiar to the students was a way to invite them into experimentation. Furthermore, the factor of playfulness in creative dance teaching, identified in the interview study, is highlighted in these findings. Perhaps the playful character of the dance assignment was also key to invite the students to engage in the experimentation.

Engaging with a post-anthropocentric and Deleuzian approach in the analysis of the empirical material from the pedagogical intervention study provided me with new ideas about conducting analysis. During the project I was introduced to ways of exploring how movement of matter can provide insights about creative dance teaching. If focused only on studying human's perceptions, expressions and experiences when it comes to teaching can involve a risk of limiting possibilities of exploring what else can count as an agent in a classroom (Ceder 2019). By putting Deleuze's materialist philosophy to work, I show how human and non-human materialities can be regarded as agential dur-

ing creative dance lessons. In other words, a post-anthropocentric approach can be said to extend existing research by considering aspects other than those often key in qualitative research, such as human experience and subjectivity (Brinkmann 2017). In my review study I concluded that no studies were found working with a posthumanist approach in the field of dance in PE and PETE. The findings also showed that very few studies in creative dance in PE and PETE engage with critical questions of, for instance, gender and disabilities. With the findings I show how various theoretical approaches are used to guide scholarly work and to develop questions that are relevant to explore in order to gain further understanding of creative dance teaching in PE and PETE. Letting a range of different theoretical approaches permeate the research field can be relevant because that could potentially invite more ways to think about creative dance and teaching. In this thesis, I have suggested ways to let Deleuze's philosophy guide a study on creative dance teaching in PETE.

6.3. Conclusions

The findings from my thesis contribute with knowledge about how creative dance in Swedish PETE can be taught and experienced. In my thesis I suggest ways in which teaching in PETE can provide opportunities for the future PE teachers to gain experience of creative dance. The main contributions of my thesis entail pedagogical insights into creative dance teaching in Swedish PETE, knowledge about PETE students' expressions and experiences when participating in creative dance lessons, and, a new theoretical approach to studies of creative dance in PETE.

The thesis can be regarded as a document extending from Ling's ideas of an aesthetic element of his gymnastic system about two-hundred years ago, through the valuable work of the female PETE culture within movement and dance during the 1900s, and the significant research made by scholars today in the research field of creative dance in PE and PETE referred to in this text. Something that seems to persist from Ling's gymnastic system to today's creative dance teaching is the ambition to provide opportunities for students to make visible, or express, their thoughts and emotions through movement. With this thesis, I suggest that what students express can involve indetermination.

I have engaged closely with theory when working with my empirical material. Deleuze's philosophy has provided ways to think about how indetermination and human and non-human materialities can play part of creative dance teaching in Swedish PETE. Referring to the title of my thesis, 'Indetermination in creative dance', my findings have

illustrated ways of understanding indetermination when it comes to creative dance teaching in Swedish PETE. First, due to creative dance being something new to many PETE students, what will happen during creative dance lessons is often indeterminate to them. This affects PE teacher educators' pedagogical considerations in several ways, as discussed above. Second, PE teacher educators stress the importance of exploration of movement without pre-determining particular movement outcomes, and they emphasize that experimentation sometimes take time. Third, I show how Deleuze's philosophy can constitute a source of inspiration when teaching mirror assignments during creative dance lessons. Indetermination was highlighted in relation both to teaching and to expressions and experiences of PETE students. And, fourth, when paying attention to how human and non-human materialities produce movement during creative dance lessons, it is indeterminate what situations PE teacher educators, as well as students, will encounter in teaching. My thesis shows various ways how teaching can encourage PETE students to engage with a teaching area that can be unfamiliar to them. The pedagogical insights presented in this thesis can support PE teacher educators and PE teachers when considering teaching creative dance.

6.4. Limitations and future directions

My thesis has both limits and strengths. The first feature that can be considered a strength and a limitation relates to the interview study. I had met some of the interviewees prior to the study, which might have affected the production of empirical material. When re-reading the transcriptions, I noticed that what was meant by some of the central aspects of teaching creative dance described by the interviewees, such as exploration, seemed to be taken for granted by the participants and therefore not explained in much detail. My acquaintance with some of the interviewees can also be said to have produced more in-depth reflections about, for example, content and structures in teaching when exploration and creation are of central importance. If I had not known any of the interviewees, and perhaps not had any prior knowledge or experience of teaching in PETE myself, the participants could have produced other kinds of descriptions of content and structures in teaching. Moreover, if the analysis of the interviews would have included the educational background of the teacher educators or whether they were relatively new to PETE or not, I might have gained greater insights into their pedagogical considerations.

The pedagogical intervention study brought with it several things to consider in terms of limitations. The time allocated to teaching creative dance in the course was limited. Consequently, I had little time to reflect upon the data during the implementation of the study. More time for the implementation of the study might have opened up for other relevant questions during the study. Furthermore, consecutive interviews with the PETE students could have developed the insights further by following up on the empirical material I had produced. I am also cognizant that, a) the findings from the small sample of the intervention study concentrated on a relatively few dance assignments do not necessarily comprise PETE students' expressions and experiences produced by other assignments in creative dance, and, b) if the research participants had been students who had recently entered the teacher education program, rather than enrolled in their fifth and final year of the teacher education program as was the case in this study, I might have produced other interesting findings. In other words, the pedagogical intervention study and the findings are context dependent.

Another limitation relates to the theoretical approach of my thesis. Deleuze's work is philosophy, not a learning theory or a theory on teaching. Thus, it does not provide me as a researcher with concepts that are specifically about the phenomena I am studying, compared to, for instance, Vygotsky's sociocultural theory of learning or Mosston and Ashworth's spectrum theory of teaching. In addition, Deleuze's philosophy did not enable me to, for instance, explore how aspects of gender or class affiliation of PETE students might influence their abilities to engage in experimentation. In other words, I have not explored what creative dance can mean for particular kinds of students (for instance female, transgender or male; with or without social or economic capital). Because there are few studies exploring such kinds of questions, as identified in the literature review, aspects of gender or class affiliation of PETE students can be valuable to study to find out more about how, and when, creative dance teaching might produce enjoyment, anxiety or fear with students.

Moreover, my thesis has not been a study of whether PE teacher educators teach creatively (cf. Jeffrey and Craft 2010), if or how students develop their creativity in dance (cf. Neville and Makopoulou 2021). Rather, as shown in the thesis, its main contribution concerns knowledge about creative dance teaching in PETE when it comes to providing students with opportunities to operate in situations unfamiliar to them, to spend time with experimentation, and to express and experience that which they can only sense.

Lastly, a note on potential future research directions. During my doctoral studies, I have gradually become more aware of how Deleuzian and posthumanist theories can potentially provide new ways to engage with aspects of creative dance teaching. My

engagement with new theories has affected my ways of thinking, in line with experiencing an encounter. Deleuze (1994) formulates an encounter as “[s]omething in the world [that] forces us to think. This something is an object not of recognition but of a fundamental encounter” (p. 139). Similarly, Foucault (2000) describes thinking like this: “[A]s soon as people begin to no longer be able to think things the way they have been thinking them, transformation becomes... urgent, very difficult, and entirely possible” (p. 161). After my encounters with new theories, I tend to see creative dance teaching, as well as my personal experiences outside of academia, slightly differently. In light of these encounters, I think that important contributions to the research field lie ahead. One example concerns further exploration of how Deleuze’s philosophy can inform questions of methodology. This can today be seen in educational research sometimes referred to as post-qualitative inquiry. Post-qualitative inquiry might be able to inform creative dance studies, and physical education research, in the time to come. In the research field of sport and exercise psychology, Monforte and Smith (2021) have aligned with the critique of the Deleuze-oriented educationalists St. Pierre (2021, 2023), Mazzei (2021) and Jackson (2017). Monforte and Smith (2021) suggest that post-qualitative inquiry can provide scholars in their research field with possibilities for producing different knowledge and producing knowledge differently. Scholars have also introduced post-qualitative inquiry into the field of sport, exercise and health sciences (Fullagar 2017; Giardina 2017), and has begun to make its way into physical education research (Olive and Enright 2021; Hordvik et al. 2019; Mikaelis 2017; Taylor et al. 2016). Hopefully, studies related to post-qualitative inquiry, or other, will serve as further important ways to produce different knowledge and producing knowledge differently in studies of dance in the context of PE and PETE.

7. Sammanfattning på svenska

Bakgrund

Dans har varit ett undervisningsområde inom idrottsämnet i skolan i flera länder under lång tid (Mattsson and Lundvall 2015; Vertinsky 2009). Dans, eller snarare estetisk form av gymnastik med influenser från dans, blev i början av 1900-talet en rörelsepraktik inom idrottsläroverutbildningen i Sverige, såväl som internationellt (Lundvall 2015a). Undervisningsområdet har erbjudit en viktig rörelseutbildning för barn och fortsätter att göra det. Idag ingår dans som en obligatorisk aktivitet i läroplanen för idrottsämnet i skolan i 23 europeiska medlemsländer, Sverige inkluderat (Konstantinidou 2023), såväl som i Storbritannien (Payne and Costas 2021).

Dansundervisning är dock inte vanligt förekommande i idrottsundervisningen i skolan, i synnerhet inte den del av undervisningen som berör expressiv dans där elever bland annat kan introduceras till kreativa processer (Adamčák et al. 2023; Steinberg and Steinberg 2016; Mattsson and Lundvall 2015). I en skandinavisk kontext, såväl som internationellt, vittnar idrottslärare om bristande erfarenhet av dans och dansundervisning och att de kan känna sig obekväma med att inkludera dans i sin undervisning (Rustad 2017; Bajek et al. 2015). Idrottslärare tenderar att välja att undervisa andra rörelsepraktiker före dans. Om idrottslärare – trots sin bristande erfarenhet – är motiverade att lära ut expressiv dans, lämnas de ofta ensamma om att hitta lämpliga undervisningsmetoder (Ørbæk 2018; Steinberg and Steinberg 2016). Trots idrottslärares bristande erfarenhet och självförtroende har var fjärde lärare uppgett i en svensk undersökning att de skulle vilja lägga mer tid på att undervisa i dans (Lundvall and Meckbach 2008). Idrottsläroverutbildning spelar här en avgörande roll för att ge framtida idrottslärare möjligheter att få erfarenhet och kunskap om dans i undervisningen (Rustad 2017). Det ligger även ett ansvar på idrottsläroverutbildning att vidga de blivande idrottslärares rörelse-repertoar, bland annat genom att uppmuntra studenter att röra sig utanför deras bekvämlighetszoner (Backman et al. 2020).

Expressiv dans är ofta en ny upplevelse för studenter när de börjar sin idrottsläroverutbildning (Ørbæk 2018; Rustad 2017). När idrottsläroverstudenter börjar sina studier för-

knippar de idrottsämnet med olika idrotter och hälsa men inte med dans. På grund av deras bristande erfarenhet, sociala normer och förutfattade idéer om dans upplevs ofta deltagande i lektioner i expressiv dans som utmanande och kräver mod av idrottslärostudenter (Heikkinen and Mattsson 2022; Rustad 2012; Lundvall and Maivorsdotter 2010). Samtidigt kan idrottslärostudenter uppleva glädje när de deltar i lektioner i expressiv dans när de skapar dans tillsammans med sina klasskamrater. Under idrottslärostudenter utbildningen möter studenterna nya sätt att både undervisa och dansa (Ørbæk 2018).

Läroplaner i svensk idrottslärostudenter utbildning hänvisar till skapande och utforskande i dansundervisningen. Men forskningslitteraturen är begränsad när det gäller expressiv dansundervisning i idrottslärostudenter utbildning i en skandinavisk såväl som en internationell kontext, och internationellt. Givet detta är en ambition med denna avhandling att öka kunskap om expressiv dansundervisning i idrottslärostudenter utbildning.

Syfte och frågeställningar

Det övergripande syftet med denna avhandling är att utforska hur expressiv dans i svensk idrottslärostudenter utbildning undervisas och upplevs. Följande specifika forskningsfrågor behandlas i fyra artiklar: 1. Hur används teoretiska tillvägagångssätt i studier om expressiv dansundervisning i idrottsämnet och i idrottslärostudenter utbildning? 2. Hur beskriver svenska idrottslärostudenter utbildare sin undervisning av kreativa aspekter av dans i PETE? 3. Vad uttrycker och upplever idrottslärostudenter när de deltar i spegelövningar under lektioner i expressiv dans i idrottslärostudenter utbildning i Sverige och vilka insikter kan man få gällande expressiv dansundervisning? 4. Hur samskapar mänskliga och icke-mänskliga materialiteter i rörelseutforskande i expressiv dans i svensk idrottslärostudenter utbildning och vilka är de pedagogiska implikationerna för expressiv dansundervisning?

Metodologi och teori

Avhandlingen bygger på tre studier: en litteraturöversikt, en intervjustudie och en pedagogisk interventionsstudie. Dessa tre studier har resulterat i fyra artiklar. I analyserna av intervjustudien och interventionsstudien guidas jag av Gilles Deleuzes filosofi (t.ex. May 2005; Deleuze 1994; Deleuze and Guattari 1987).

Syftet med litteraturöversikten var att utforska hur olika teoretiska tillvägagångssätt används i studier om expressiv dansundervisning i idrottsämnet och i idrottslärostudenter utbildning.

ning. Inspiration togs från metodologin av en narrativ litteraturöversikt för att göra det möjligt att sammanfatta, jämföra, förklara och tolka studier som är relevanta för mina syften. 33 sakkunnigbedömda empiriska studier om expressiv dans i idrottsämnet och idrottslärarutbildning identifierades och analyserades. De analytiska frågorna som guidade analysen var: Vilka centrala idéer om expressiv dansundervisning genomsyrar litteraturen? och, Hur används teoretiska tillvägagångssätt för att utforska dessa idéer?

I intervjustudien var syftet att utforska hur expressiv dans undervisas i svensk idrottslärarutbildning för att bemöta avhandlingens övergripande syfte. I studien undersökte jag hur en idrottslärarutbildare från var och en av de åtta idrottslärarutbildningarna i Sverige beskriver kreativa aspekter av dans och deras undervisning av dessa. I denna studie har analysen inspirerats av ett abduktivt tillvägagångssätt. Analysen präglades av en systematisk process där data och teori kontinuerligt diskuterades av medförfattare och mig. Analysen inspirerades teoretiskt av Deleuzes och Félix Guattaris koncept släta och räfflade rum och experimenterande. De analytiska frågorna som guidade analysen var: Hur visas släta och räfflade rum i lärarnas beskrivningar av undervisning av kreativa aspekter av dans? och, Hur talar lärarna om sin undervisning i termer av ett experimenterande?

Den efterföljande studien syftade till att bemöta avhandlingens övergripande syfte att utforska hur expressiv dans i svensk idrottslärarutbildning undervisas och upplevs. Jag genomförde en liten pedagogisk intervention med idrottslärarstudenter och mig som lärare/forskare. Elva studenter, sex kvinnor och fem män i åldern 22 till 28 år under sitt femte och sista år på idrottslärarutbildningen, deltog i studien. Sju lektioner som var och en var 90 minuter tilldelades mig inom en tidsram av nio dagar. Två analyser gjordes av det empiriska materialet. Den första analysen var återigen inspirerad av ett abduktivt tillvägagångssätt. Analysen var iterativ och präglades av en systematisk process i samarbete mellan medförfattarna och mig. De deleuzianska begreppen palpation och experimenterande inspirerade vår analys. De analytiska frågorna som guidade analysen var: Hur utvecklas processer för att palpera skillnad när det gäller idrottslärarstudenternas deltagande i expressiv dans? och Hur talar, agerar och skriver idrottslärarstudenterna i termer av vad de uttrycker och upplever när de dansar genom att experimentera? Den andra analysen av det empiriska materialet var en postantropocentrisk och deleuziansk analys. Det empiriska materialet bearbetades på flera sätt. Min medförfattare och jag började med att läsa in oss på begrepp från Deleuze, såsom assemblage och experiment, och postantropocentriska studier i utbildningsområdet. Vi skapade två analytiska frågor: Hur samskapar mänskliga och icke-mänskliga materialiteter i rörelseutforskande i expressiv dans? och, vilka är de pedagogiska implikationerna när materialiteter utgör en

betydande del av rörelseutforskande i expressiv dans? Mot bakgrund av de analytiska frågorna tog vi fram en instruktion som jag tog med mig när jag analyserade det empiriska materialet. Instruktionen gick ut på att identifiera sekvenser där mänskliga och icke-mänskliga materialiteter tycktes utgöra en särskilt aktiv del av rörelseutforskandet och där oförutsägbarhet var framträdande.

Resultat

Avhandlingen visar att idrottslärarutbildare i Sverige har specifika idéer om expressiv dansundervisning. De uppger att det mesta de undervisar är nytt för studenterna och att uttrycka sig genom rörelse kan vara utmanande för studenterna. Resultaten målar upp en liknande bild som tidigare studier som visar att många studenter möter expressiv dans för första gången i idrottslärarutbildning, och att de kan uppleva obehag och till och med rädsla när de ställs inför expressiv dansundervisning. Resultaten visar att sådana känslor sannolikt relaterar till studenternas förväntningar av vad det innebär att lära sig dansa, bland annat i ljuset av de officiella styrdokumenterna för idrott och hälsa i skolan.

Avhandlingen visar att idrottslärarutbildare anser att det är viktigt att undervisa idrottslärarstudenter på ett sätt så att studenterna själva upplever och utforskar expressiv dans, snarare än att förse studenterna med metoder att använda när de själva undervisar skolelever i idrott och hälsa. Fyra faktorer av expressiv dansundervisning genomsyrar idrottslärarutbildarnas beskrivningar. Faktorerna är; att ge vägledning och trygghet, att artikulera ramar tydligt, att låta studenterna utgå från välbekanta rörelseupplevelser, och lekfullhet.

Idrottslärarutbildarna konstaterar också att brist på tid som avsatts för dans i deras idrottslärarutbildning hämmar deras undervisning av expressiv dans. Tidsbristen är problematisk mot bakgrund av tidigare studier som visar att för att idrottslärarstudenter ska få kunskaper i dans och dansundervisning krävs tid och kraft och att de studenter som har erfarenhet av dans från skolan har en stor fördel.

Resultaten från avhandlingen visar också hur inspiration från Deleuzes filosofi kan bekräfta och utveckla idéer om att undervisa expressiv dans i idrottslärarutbildning. Här noterade jag att obestämdhet kan utgöra en faktor både när det gäller undervisning av spegelövningar och när det kommer till studenters uttryck och upplevelser när de deltar i spegelövningar.

Dessutom visar avhandlingen att det vanligaste teoretiska tillvägagångssättet i studier om expressiv dans i idrottsämnet och idrottsläroarbete var fenomenologisk, att väldigt få studier sysslar med kritiska frågor om till exempel genus och funktionsnedsättningar, och att inga studier arbetar med ett posthumanistiskt förhållningssätt. Avhandlingen illustrerar hur ett postantropocentriskt och deleuzianskt tillvägagångssätt kan ses som ett sätt att vidareutveckla studier om materialitet i expressiv dansundervisning i idrott och hälsa och i idrottsläroarbete och för att utveckla idéer om expressiv dansundervisning i idrottsläroarbete. Detta teoretiska tillvägagångssätt kan visa hur expressiv dansundervisning kan involvera att uppmärksamma vad mänskliga och icke-mänskliga materialiteter kan bidra till i ett rörelseutforskande.

Slutsats

Sammanfattningsvis bidrar denna avhandling med kunskap om hur expressiv dans i svensk idrottsläroarbete kan undervisas och upplevas. De huvudsakliga bidragen av min avhandling innefattar pedagogiska och didaktiska insikter i expressiv dansundervisning i svensk idrottsläroarbete, kunskap om idrottslärostudenters uttryck och upplevelser när de deltar i lektioner i expressiv dans, och, ett nytt teoretiskt tillvägagångssätt till studier om expressiv dans i idrottsläroarbete. Avhandlingen visar även på sätt att tänka kring hur obestämdhet och mänskliga och icke-mänskliga materialiteter kan utgöra en del av expressiv dansundervisning i svensk idrottsläroarbete. Avslutningsvis visar min avhandling olika sätt som undervisning kan uppmuntra idrottslärostudenter att engagera sig i ett undervisningsområde som kan vara obekant för dem. Insikterna som presenteras i avhandlingen kan bidra till idrottsläroarbete och idrottslärares arbete med att inkludera expressiv dans i sin undervisning.

8. Sammanfattning av artiklarna

Artikel I (opublicerat manuskript)

Creative dance teaching in physical education and physical education teacher education - a literature review

Syftet med detta manuskript är att utforska hur olika teoretiska tillvägagångssätt kan användas i studier om expressiv dansundervisning i idrottsämnet och idrottslärarutbildning.

En litteraturöversikt med inspiration från metodologin av en narrativ litteraturöversikt användes för att göra det möjligt att sammanfatta, jämföra, förklara och tolka studier som är relevanta för mina syften. 33 sakkunnigbedömda empiriska studier om expressiv dans i idrottsämnet och idrottslärarutbildning identifierades och analyserades.

Sammantaget ger de 33 studierna en rik inblick i vad expressiv dansundervisning kan ge till rörelseundervisning när det gäller upplevelser av rörelse och relationella aspekter av rörelse. Studierna visar att det pågår en diskussion om vad expressiv dansundervisning i idrottsämnet och idrottslärarutbildning kan vara idag. Manuskriptet visar också att en majoritet av studierna skrev fram explicit vilka teoretiska koncept som de använde i sina studier, och att det vanligaste teoretiska tillvägagångssättet är fenomenologisk. Dessutom visar litteraturöversikten att väldigt få studier ägnar sig åt kritiska frågor om genus, funktionsnedsättningar eller klass, och att ingen studie arbetar med ett posthumanistiskt tillvägagångssätt.

Sammanfattningsvis visar artikeln att diverse teoretiska tillvägagångssätt kan användas för att guida forskningsstudier och för att utveckla frågor som är relevanta att utforska i syfte att skapa mer förståelse av expressiv dansundervisning i idrottsämnet och idrottslärarutbildning.

Artikel II

‘Free but not free-free’: teaching creative aspects of dance in physical education teacher education

Syftet med denna artikel är att skapa insikter om hur idrottslärarutbildare förstår kreativa aspekter av dans i sin undervisningspraktik. För att besvara detta syfte undersöker vi hur idrottslärarutbildare beskriver sin undervisning av kreativa aspekter av dans. Empiriskt består denna studie av en kvalitativ intervjustudie med en idrottslärarutbildare från var och en av de åtta idrottslärarutbildningar som finns i Sverige (n = 8). Analysen av det empiriska materialet är inspirerad av Deleuze-guattariansk teori. Resultaten av studien visar att idrottslärarutbildare har ganska specifika idéer om kreativa aspekter av dans. Resultaten visar även att undervisning i expressiv dans kan ge undervisning i idrottsämnet och idrottslärarutbildning alternativ till principer som privilegierar färdigheter i idrott och fysisk träning. Idrottslärarutbildare förväntar sig att det studenterna gör ska produceras genom processer av rörelseutforskande, och inte genom utförande av korrekta eller inkorrekta rörelser. Dessutom tyder resultaten på att expressiv dans bidrar med dansundervisning i idrottsämnet och idrottslärarutbildning pedagogiska värden genom att betona ett kreativt lärande i rörelse genom vilken studenterna lär sig att anpassa sig till nya och oförutsägbara situationer. Undervisning i kreativa aspekter av dans görs genom det Gilles Deleuze kallar olika räfflade utrymmen som både begränsar och möjliggör tillfälliga släta utrymmen som möjliggör expressiv dansundervisning.

Artikel III

Dancing as searching with Deleuze – a study of what students in physical education teacher education express and experience in creative dance lessons

Syftet med denna artikel är att skapa insikter i vad idrottslärarstudenter uttrycker och upplever när de deltar i spegelövningar under lektioner i expressiv dans i svensk idrottslärarutbildning. För att nå detta syfte utforskar vi idrottslärarstudenters deltagande i expressiv dans och vad som händer när utrymmen för rörelseutforskande görs tillgängliga i dansundervisningen i idrottslärarutbildning. För att studera detta bestod det empiriska materialet av en pedagogisk sekvens av expressiv dansundervisning med en lärare/forskare och studenter vid en svensk idrottslärarutbildning. De teoretiska begreppen palpation och experimenterande (May 2005; Deleuze 1994) användes för att vägleda analysen av vad idrottslärarstudenterna uttrycker och upplever när de deltar i rörelseimitation under lektioner i expressiv dans.

Resultaten från denna studie visar tre sätt att delta i spegelövningar i relation till vad studenterna uttrycker och upplever i expressiv dans i idrottslärarutbildning: (a) att röra sig i oförutsägbara utrymmen, (b) att nästan dansa, och (c) att fungera som ett medel för dansen. Resultaten visar alternativa sätt att förstå vad som kan hända när idrottslärarstu-

denter deltar i ett rörelseutforskande under lektioner i expressiv dans. Resultaten antyder att det idrottslärarstudenter upplever i ett rörelseutforskande inte är helt möjligt att förutsäga.

Sammanfattningsvis visar artikeln hur expressiv dansundervisning kan erbjuda idrottslärarstudenter möjligheter att experimentera med rörelse. Våra resultat kan hjälpa forskare och idrottslärarutbildare att förstå idrottslärarstudenters upplevelser av att engagera sig i utforskande processer i idrottslärarutbildning, och hur dessa upplevelser kan användas i expressiv dansundervisning.

Artikel IV

Exploring movement in creative dance: Introducing ‘dancemblage’ in physical education teacher education

Denna artikel studerar hur materialiteter, mänskliga såväl som icke-mänskliga, utgör en del av utforskande av rörelse under lektioner i expressiva dans i svensk idrottslärarutbildning. Den undersöker också vilka de pedagogiska konsekvenserna är när materialiteter utgör en betydande del av rörelseutforskandet i expressiv dans. Vår metodologiska utgångspunkt är en pedagogisk enhet i expressiv dans i idrottslärarutbildning där studenter och en lärare tillsammans utforskade rörelse och rörelseuppslag.

Deleuzes begrepp assemblage och materialitet guidar analysen tillsammans med pedagogiska studier med postantropocentriska utgångspunkter varav vissa bygger direkt på Deleuziansk teori. Analysen omfattade dokumentation av sekvenser, som vi definierade som ‘dancemblages’, där mänskliga och icke-mänskliga materialiteter tycktes utgöra en särskilt aktiv del av rörelseutforskandet och där inslag av oförutsägbarhet var framträdande.

I resultaten presenteras två ‘dancemblages’: Dancemblage nr 1: muskler-gravitation-golv-plast och Dancemblage nr 2: textilier-friktion-panna-trä. Resultaten visar på sätt att skapa medvetenhet om materialitet som del i undervisning i idrottslärarutbildning där expressiv dansundervisning blir en uppgift att uppmärksamma vilka mänskliga och icke-mänskliga materialiteter som bidrar till rörelseutforskande.

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Appendix A: Interview guide

Vad roligt att du vill ställa upp i en intervju i mitt forskningsprojekt. I den här studien jag gör nu, undersöker jag undervisning i området rörelse och dans inom idrottsläroutbildning, och eventuella inslag av utforskande och skapande i undervisning i rörelse och dans.

Vad arbetar du med för tillfället när det kommer till undervisning?

Vad har du för bakgrund när det kommer till undervisning i området rörelse och dans? ((*undervisning, utbildning, fortbildning, annan erfarenhet*))

Förutsätt att jag är en ny student som ska börja på er idrottsläroutbildning, och jag bad dig beskriva området rörelse och dans i utbildningen. Vad skulle du berätta för mig då?

eventuell följdfråga: Vad tar ni upp inom området rörelse och dans? *eller* Vilken typ av rörelse använder de studerande sig av?

Är du ensam om att undervisa i området rörelse och dans, eller är ni flera som undervisar i det området? Vill du berätta lite om er fördelning av undervisningen i rörelse och dans?

Skulle du säga att det finns delar i din undervisning när studenterna får arbeta med utforskande eller skapande i rörelse och dans?

Om ja: Om jag skulle följt med dig under en av dina lektioner i rörelse och dans när du jobbar med studenterna med utforskande eller skapande, vad skulle jag få se då?

Om nej: Är lek någon del av din undervisning i rörelse och dans? *Om ja:* Om jag skulle följt med dig under en av dina lektioner i rörelse och dans när du jobbar med studenterna med utforskande eller skapande, vad skulle jag få se då?

Om nej också på frågan om lek: Är det något annat område inom idrottsläroutbildningen där ni jobbar mer med utforskande eller skapande eller kreativitet? *Om ja:* Vill du berätta något om hur ni jobbar med det där?

Om jobbar med det i andra områden: Kan man se drag av detta även inom området rörelse och dans?

När du ska få studenterna in i en process av skapande, och du använder dig av någon form av stimuli eller instruktion eller övning eller stegkombinationer eller

annan inspiration; kan du berätta med så mycket detaljer som det går om hur du kan börja processen med studenterna?

Det skulle vara intressant att höra dig berätta om ett par övningar du har använt i din undervisning. Vill du göra det?

Låter du ofta studenterna börja i något som är bekant för dem, som de känner igen, för att sen göra något nytt av det eller utveckla det? Har du några tankar om det?

Använder du dig av improvisation i din undervisning i rörelse och dans?

Om ja: **Det vore intressant att höra dig berätta hur du kan arbeta med improvisation. Vill du göra det?**

Om nej: Vilka andra sätt arbetar du på under en lektion i rörelse och dans?

Om inte vet vad improvisation kan vara: Vanligtvis handlar det om att läraren ger någon form av ram eller instruktion eller stimuli till studenterna som dem får utforska. Är det något du känner igen från din egen undervisning? Det vore intressant att höra dig berätta om det. Vill du göra det?

Det skulle vara intressant att höra dig berätta om du har arbetat med koreografi eller komposition i din undervisning. Vill du dela med dig av nån gång du arbetat med det med studenterna?

När du får studenterna att arbeta med ett utforskande och skapande i rörelse och dans: låter du studenterna arbeta enskilt, i par, små grupper eller helklass?

Hur skulle du beskriva ett ungefärligt upplägg av dina lektioner där utforskande eller skapande av rörelse och dans ingår?

Vi är nu ungefär halvvägs genom intervjun och från min synvinkel så går det jättebra. Du har berättat väldigt intressanta saker som hjälper mig framåt i mina studier. Hur tycker du det går?

Jag ska bara ta en titt så att jag har fått med de frågor jag hade tänkt så här långt.

Jag vill gärna fortsätta ta del av när du berättar om din undervisning i rörelse och dans.

Har du några tankar kring lek i relation till undervisningen i rörelse och dans med studenterna?

Om ja: Vad skulle det kunna handla om?

Vad skulle du säga studenterna utvecklar när de arbetar med utforskande och skapande?

I ett kommentarmaterial till Skolverkets styrdokument nämns att rörelse och dans bör lyftas ur flera olika perspektiv, bl.a. som ett kreativt uttryckssätt.

Vad betyder kreativitet för dig?

eventuell följdfråga: Har du några tankar om hur idrottslärover utbildare skulle kunna utveckla studenters kreativitet genom området rörelse och dans, och i förlängningen elevernas kreativitet?

eventuell följdfråga: Vilka metoder kan du tänka som viktiga att ta till i undervisningen för att undervisa kring kreativitet?

Om du tänker på lektioner som innehåller delar av utforskande, prövande, skapande; ser du skillnader mellan att studenterna arbetar *lite grann* kreativt och när de arbetar *mer* kreativt?

Om ja: Vill du berätta om hur studenterna visar det?

Om nej: Upplever du att studenterna arbetar kreativt nån gång under lektionerna?

Har du någon erfarenhet, från din undervisning i rörelse och dans när studenterna har arbetat med mer skapande eller kreativt, att de har skapat eller uttryckt något nytt, gjort något de inte har gjort tidigare?

Skulle studenter under en kreativ lektion i rörelse och dans kunna skapa något *helt nytt*? *Om ja eller nej,* vill du utveckla dina tankar kring det här?

Jag kommer nu skifta fokus lite grann. Vi är inne på samma tema kring rörelse och dans, men med en liten annan vinkling.

Undervisning i rörelse och dans sägs ibland utveckla studenters och elevers kroppsmedvetenhet och rörelsemedvetenhet och att den medvetenheten är kopplad till hur de uppfattar sig själva och sin omgivning. Vad tänker du kring det?

Nu har vi kommit fram till sista delen av intervjun.

Jag skulle vilja säga två begrepp som jag har stött på i samband med undervisning i rörelse och dans, och se om du har några tankar kring dem.

Första är "förkroppsligat kunnande". Har du några tankar om det?

Det andra begreppet är ett engelskt begrepp: body-mind connection. Är det något du har stött på? Har du några tankar om det?

om finns tid: Skulle du kunna beskriva en okreativ lektion eller okreativ student?

Om ja: Vad skulle det kunna vara? // Är då ... och ... (motsatsen) kreativt?

om finns tid: Är trygghet viktigt under en lektion där du jobbar mer med utforskande eller skapande?

Om ja: Varför skulle du säga att det är viktigt?

Och, har du något sätt som du skapar öppenhet under lektionerna?

Om nej: Är studenterna så öppna i sig själva så att det inte behövs i undervisningen?

om finns tid: Är öppenhet viktigt under en lektion där du jobbar mer med utforskande eller skapande?

Om ja: Varför skulle du säga att det är viktigt?

Och, har du något sätt som du skapar öppenhet under lektionerna?

Om nej: Är studenterna så öppna i sig själva så att det inte behövs i undervisningen?

Är det någon fråga du tycker att jag borde ha frågat?

Appendix B: Consent form Interview study

Dance as Creative Practice in Physical Education Teacher Education

Hej!

Jag är doktorand i Idrottsvetenskap på GIH. Inom ramen för min forskarutbildning ska jag göra en delstudie vars data kommer att bearbetas och utgöra en del av min doktorsavhandling.

Detta är en förfrågan om att medverka i forskningsstudien ”Dance as Creative Practice in Physical Education Teacher Education”.

Ytterligare information innan du samtycker att delta kan ges av mig, Christopher Engdahl, eller min huvudhandledare Suzanne Lundvall vid GIH.

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Genom min underskrift visar jag att jag har fått information om studien skriftligt och jag har fått information om att deltagande i studien är helt frivilligt och att jag kan avbryta mitt deltagande när som helst utan att förklara varför.

**Jaggodkänner den.....detta
avtal för att delta i forskningsstudien beskrivet ovan.**

Underskrift.....

Appendix C: Consent form Intervention study

Hej!

Du som har valt Rörelse och Dans som profilering på kursen Idrott IV, ämnesfördjupning, kommer bland annat ha mig, Christopher Engdahl som lärare på GIH. Jag är också doktorand och arbetar med ett forskningsprojekt om expressiv dans i idrottsläro-utbildningen.

Jag kommer att be er att delta i mitt forskningsprojekt genom att medverka i dokumentationen av våra lektioner. Dokumentationen kommer att bestå av att jag ber er att skriva loggböcker om vårt arbete samt videofilma våra lektioner. Vi kommer även arbeta med digital dokumentation, som ni kommer att ladda upp i en privat Facebook-grupp. Detta blir gruppens egna rum för undervisningsmaterial under kursen och detta material får varken du eller jag som lärare sprida.

Genom att skriva under denna blankett om samtycke, samtycker du till att medverka i projektet enligt ovan. Inget material kommer att spridas och det kommer förvaras oåtkomligt för spridning, och enbart användas i mitt forskningsprojekt.

Din medverkan kommer att behandlas konfidentiellt och vara helt anonym.

Tack för ditt deltagande!

Med vänliga hälsningar

Christopher Engdahl, 08-120 537 79, christopher.engdahl@gih.se

RINGA IN DITT VAL HÄR:

JA - jag samtycker till att medverka i forskningsprojektet om expressiv dans i samband med undervisning

NEJ - jag önskar ej medverka, men kommer att delta i den planerade undervisningen i expressiv dans

NAMN

NAMNFÖRTYDLIGANDE