

Body as Classroom: Movement-based Performing Arts as an Approach to Embodied Transformative Learning in a Secondary School Classroom

Nicoletta Cappello

University of the Arts Helsinki, Finland

Eeva Anttila

University of the Arts Helsinki, Finland

Dolors Cañabate

University of Girona, Spain

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Abstract

The present article explores how *movement-based performing arts* lessons focusing on bodily imagination may expand secondary school pupils' learning experiences. The study centers on the learning experiences and emotions of 28 participants described through art-based action research and the lens of interpretive inquiry. The results of an open thematic analysis illuminate a process where initial resistance towards physical and expressive activities gradually eased and led to changes in pupils' views on how creative movement and learning might be connected. The authors interpret that movement-based performing arts focusing on bodily imagination may enhance embodied experiences and emotional engagement that support transformative learning in school contexts. The authors conclude that to develop school cultures that work towards sustainable futures, pedagogical approaches based on embodied transformative learning are needed, of which movement-based performing arts lessons are one potential approach.

Introduction

This research is motivated by the need to imagine sustainable futures (La Casa Encendida, 2022) and to be co-creators of it (Haraway, 2016). General education, as a potential site for social transformation, must foster imagination in order to prepare students to envision and shape just realities and transform society (Haiven & Khasnabish, 2010, 2014). Both creativity and imagination have an embodied dimension, and *movement-based performing arts*, which are grounded in physical perception as the foundation of creativity (Zarrilli, 2002, 2020), offer a suitable basis for their education. Globally, the general education system is still largely organized according to the supremacy of the mind over the body (Macrine & Fugate, 2021; Macrine & Fugate, 2022; Marshall, 2007). Based on the Cartesian principle, the body remains erased from education in what Spatz (2015) describes as a curriculum of “stillness and sitting” (p. 105). On the other hand, physical education may not embrace creativity and imagination and may neglect the broader framework of embodied technique (Spatz, 2015), which refers to physical practice as a field of knowledge in its own right. Embodied and movement-based performing arts practices, as a field of creative embodied knowledge, have the potential to update logocentric educational systems and involve students as co-creators of more just and sustainable futures. However, movement-based performing arts are excluded from the general education core curriculum in most European countries, including Spain; therefore, the potential of movement-based performing arts to expand physical education toward creativity and imagination remains untapped on a large scale.

The fact that movement-based arts are excluded from the core curriculum conflicts with Target 4.7 of the UN 2030 Agenda for Sustainable Development: “Education for sustainable development and global citizenship.” In an effort to achieve quality education, the European Union (EU) has given a central role to creativity as a transversal skill in the EU Framework for Key Competences (The Council of the European Union, 2018) in a recent Joint Research Center of European Commission research (Venckute et al., 2020) and in Programme for International Student Assessment of 2022 (OECD, 2019). However, EU legislation gives little attention to embodiment, embodied learning, and creativity. Further, the connection between theory and classroom application of embodied learning still shows significant points of distance (Macrine & Fugate, 2022; Nathan, 2022), and the embodied dimension of creativity has remained a tangential thread in educational practice and research (Griffith, 2021).

In the following section, we will present this study’s theoretical framework, which comprises various perspectives related to kinaesthetic imagination, embodied learning, and transformative learning (Anttila, 2015, 2018; Garre, 2003; Macrine & Fugate, 2022; Mälkki, 2011; Sheets-Johnstone, 2011, 2018; Zarrilli, 2002, 2020). We will then discuss the classroom intervention based on the first author’s specific practical knowledge of movement-based performing arts, a transversal area of the performing arts, cutting across acting, dance, and

performance that relies on “physically perceptive sensibility” (Zarrilli, 2002, p. 167) that can be the primary tool and material for creation, performing technique, and pedagogy. Rather than focusing on repertoire, movement-based performing arts are based on devising methods for generating creative materials through movement improvisation and exploration (Barba, 1995; Heddon & Milling, 2006; Keefe & Murray, 2007). The emphasis here is on techniques that focus on imagination as a bodily/kinaesthetic phenomenon as the keystone of performing, learning, and composing movement. This approach employs techniques from some of the most relevant performance pedagogues of the 20th century: Philip Zarrilli, Rudolf von Laban, Jacques Lecoq, and Michael Chekhov.

Theoretical Framework

Kinaesthetic Imagination

The most important practical and conceptual nourishment to the idea of kinaesthetic imagination presented in this article comes through the classes that the first author received during her bachelor studies in acting in physical theatre at RESAD Madrid. The most significant influences came from: Helena Ferrari, who taught as a direct alumna of the Schinca method for expressive movement descending from Laban’s; from Mar Navarro, a direct disciple of Jacques Lecoq and her teachings; and mainly from the teachings of Prof. Dr. Sol Garre (a direct student of Philip Zarrilli) who teaches his technique in combination with Chekhov’s. Drawing from the first author’s experiences in Garre’s classes¹, imagination is approached, as he frequently said, as a “kinaesthetic response to a stimulus,” consisting of a dynamic combination of embodied sensations, emotions, images, and physical movement that tends to expand daily body habits. Imagination is built through bodily presence, the horizontal union of body and mind through complex psychophysical tensions. Imagination arises inside movement, and it emerges through cultivating sensitivity to qualitative aspects of movement (Sheets-Johnstone, 2018), promoting a creative interaction between kinaesthesia and perception, leading to the elaboration of a personal and creative relationship to physical movement (Garre, 2003), that can express individual and collective imaginaries. Beyond the Cartesian dualisms that attempt to reduce the imagination to visualization, Zarrilli (2020) considers that performer’s imagining is a “processes of attending to, becoming aware of, opening perceptually toward, and being affected by [...] verbal prompts” carrying a sensorial stimulus, and of “allowing herself to be moved internally, externally, sensorially, and affectively by each verbal prompt” (p. 224). In the field of movement-based performing arts, imagination is conceived as an embodied process that emphasizes kinaesthetic sensations as both creative material and tool. Imagination than a visual result, is “a process of formation,

¹ Sol Garre “Acting Systems Course” *Physical Theatre*, (Madrid, Resad, 2015), Studio Training.

generation, enactment, or transformation per se” (p. 219) that happens through self-movement. Imagining is vibrating with the whole body at the same frequency as the imagined object to embody its movement patterns (Zarrilli, 2020). The contribution of one of the most influential dance pedagogues of the 20th century, Rudolf Laban, provides many operative cues for applying movement as a method for developing imagination and experiencing a creative dimension of movement. Laban (2011) approaches gesture—intended as movement charged with emotion and intention—as a catalyst for imagination. Michael Chekhov (2015), the eminent Russian acting pedagogue, considers imagination the foundation of individual creativity and skill, with an inherent logic that can be apprehended through movement exploration. Imagination facilitates the connection of body and mind and thus permits the mobilization of the full creative energies of the performer (Garre, 2003). Imagination for Chekhov intersects with the personal worldview underlying one’s imaginaries and ethical discernment. For Jacques Lecoq (2022), the famous French theatre pedagogue, movement, through the display of imagination, supports an intuitive understanding of the dynamic forces and spiritual qualities of nature, humans, and objects, and it provides a key tool for embodied analysis of reality (Anttila, 2018).

According to Johnson (1987), a fundamental function of abstract thinking and meaning-making happens by means of embodied image schemata rooted in gestural interaction with the environment. Imagination, according to the feminist writer Lennon (2015), is not a synonym for illusion as opposed to reality; however, it contributes to understanding and building reality because it is constitutive of perception in a relationship of mutual influence that is rooted in bodily experience. As Noë (2004) has shown, perception is essentially tied to physical action and movement because it builds upon sensory-motor knowledge that enables it and structures its contents, determining the very way we perceive, as well as what we perceive. On the other side, Rucińska and Gallagher (2021) observe that physical movement operates as a constraint on imagination, increasing the imagination’s epistemic value. New movements might add new information to pre-existent perceptual sensory-motor knowledge and change perception. As Anttila (2018) proposes, “reality and imagination may intertwine [in complex meaning making] in these creative processes” (para. 5), and so may happen in knowing and learning through moving.

Embodied Learning

From the perspective of cognitive sciences (see Macrine & Fugate, 2022), the notion of embodied cognition considers the body as a central aspect in the making of cognition beyond the brain. Sensorimotor activity and emotions are cognitive materials essential to the formation of consciousness, knowledge, and sense of self. In resonance with the view of embodied learning, *4E cognition* approaches cognition as not only embodied but also embedded within a situation, extended beyond the individual through absorbed cultural

practices and enacted inside a dynamic system by a self-producing and adaptive body (Macrine & Fugate 2022). As Macrine and Fugate (2022) explain: “the embodied learning paradigm suggests that actions, emotions, sensations, and environment can influence what is learned” (p. 3). Embodied learning can be generally described as a learning theory in which learners are entirely—through body and mind—immersed and interconnected with their social and physical environment (Anttila & Svendler Nielsen, 2019). Embodied learning provokes “changes in bodily states,” including sensations, emotions, and images, that are the “raw material” of both artistic creation and the learning process (Anttila, 2015, para. 6) and can be “understood as ‘partners’ in learning processes” (Jusslin et al., 2022, p. 2–3). The actions that convey learning affect the “pre-reflective level,” facilitating connections between different levels of consciousness, pre-reflective and reflecting: “What is non-symbolic in origin generates symbolic representations” by linking physical experiences to cultural meanings (Anttila, 2015, para. 6). Philosopher and dancer Sheets-Johnstone (1999) argues that emotions have an ineliminable kinaesthetic dimension for both human and non-human animate beings: “Movement and emotion proceed hand in hand” (p. 262), movement is affective, and emotion is a kinaesthetic phenomenon. In addition, as Anttila (2015) suggests, the connection between physical movement and emotions might foster emotional attention, clarity of feelings, and emotional repair (Anttila et al., 2019; Cañabate et al., 2020).

Sadly, as Anttila (2015) observes, in most educational contexts, “learners are too often encouraged to suppress feelings, imagination, and sensations as something that is not useful for success and academic achievement,” and further, “the educational climate that sets the tone for learning often seems to work in the opposite direction” (para. 7) to connecting with emotions, including in learning activities centered on movement. In the school system, the implicit principle is to consider knowing as a disembodied activity, the body as an inert object incapable of thinking, and movement as an automatic and feelingless action with no knowing value (Sheets-Johnstone, 2011; Spatz, 2015). In opposition to this Cartesian vision, Sheets-Johnstone (2011) has asserted the primacy of movement and the body in knowledge generation, building upon Husserl’s natural progression from “‘I move’ to ‘I do,’ to ‘I can do’” (p. 199). Therefore, knowledge (“I can”), including abstract thinking, emerges from movement: “Primal animation is the bedrock of learning to move oneself, and learning to move oneself is the foundation of perceiving the world” (p. 212). Sheets-Johnstone (2011) suggests that Western culture might need to re-learn how “to move oneself” (p. 212) through aware and non-habitual self-movement to rediscover spontaneity and agency in movement and the role of moving in knowing. Learning to move oneself is both learning about oneself and others through expressing one’s inner world through movement and reading emotions, images, and sensations behind others’ movement (Anttila, 2015). Embodied learning is often unpredictable and non-representational (Fenwick, 2015). Another critical aspect of embodied learning is performativity (Anttila, 2018), a phenomenon regarding bodily

gestures that intertwine art and everyday life, impacting reality by reproducing it or transforming it through practice and opening spaces for freedom and possibilities (Anttila et al., 2019).

Bersalou (2020) invites scholars to embrace a more expansive concept of embodiment and to go beyond the connection between embodiment and actual visible movement. Bersalou considers only visible movement to be actual movement, and he does not evaluate actual movement as crucial for entering the embodied dimension of actions, events, and situations. Far from trying to contradict Bersalou's suggestion on a theoretical level, we propose the opposite strategy from an art-pedagogical perspective: to adopt a wider concept of actual movement for framing a learning experience as embodied. This wider concept of actual movement proposed here is creative movement as it conveys kinaesthetic imagination, which ranges from invisible/visible movement, outer/inner movement, and external/internal movement as three poles of a movement continuum. Manifesting through the displacement of energy/breath (Yuasa, 1980; Zarrilli, 2020), inner movement and stillness can also be included in the range of actual physical movement, lying on the "invisible" side of the invisible/visible movement polarity. As Anttila (2015) suggests, "a felt-sense of the body can be heightened through movement, through practicing different ways of paying attention to personal and others' experiences" (para. 11). Creative movement, by supporting kinaesthetic imagination, may help to track, localize, and foster subtle changes in our bodily states—images, emotions, and sensations—by enlivening the memories stored in sensory-motor circuits and intensifying the experience of the tactile-affective-kinaesthetic elements of movement (Anttila, 2015; Sheets-Johnstone, 2018). Creative movement, as presented in this article, might serve as an educational tool to facilitate on an operative-practical level the application of theoretical knowledge about embodied learning in the classroom in connection to creativity.

Transformative Learning

A crucial role of emotions in cognition and reflection is recognized by Mälkki (2011), who sheds light on embodied aspects of transformative learning in her relevant theorization. By connecting the theories of Mezirow (1978, 2000) and Damasio (1994, 1999, 2003, 2019), Mälkki suggests that consciousness follows the body in the pursuit of survival, being oriented by emotions to preserve the continuity of meaning-systems as an analogy of biological systems. In the same way, unpleasant emotions arise and are avoided by the body in situations that threaten body integrity, and unpleasant emotions arise and are avoided by consciousness in situations that threaten the meaning structures in use. An interpreting person tends to resist reflection by maintaining their consciousness and emotions in the "comfort zone" (Mälkki, 2011, p. 30), following the pleasant feeling of making meaning within the assumptions in use without needing to change them. The interpreting person consequently avoids the edge-emotions, those unpleasant emotions that arise when one is unable to understand a situation

within the meaning structures in use, and thus feels challenged. The person typically reaffirms older assumptions, adapting them improperly to the new context or attaching edge-emotion to an external factor other than one's assumptions. During reflection, defined as the process of becoming aware of feelings, thoughts, and actions and questioning the assumptions underlying our consciousness, edge-emotions have a central role. When a person faces a crisis, she might perceive her assumptions as problematic in reading a new reality, but the unpleasant emotions arising from the perception of the problem might as well mask the faulty assumption and prevent her from reflecting. On the other hand, edge-emotions might be the only entry point to reflection through recognizing unpleasant emotions as partially generated by problematic assumptions. When the unpleasant emotions are acknowledged in relation to the meaning system's insufficiency for making sense of contextual reality, and as a part of the overall unpleasant feeling in a given situation, the interpreting person might wish to start a reflection process to review their meaning system towards relieving one's emotions.

Research Questions, Aim of the Research, and Methodology

The present article aims to analyze the participants' learning experiences and emotions and explore the kinds of learning elicited through movement-based performing arts lessons that focus on bodily imagination. The research questions are the following:

- RQ1: What kinds of experiences and emotions do the students describe in the context of movement-based performing arts classes that focus on kinaesthetic imagination?
- RQ2: What kinds of learning might movement-based performing arts classes that focus on kinaesthetic imagination elicit/enhance?

Participants and the Context of the Study

The research participants were 28 adolescents of different genders aged between 14 and 15 years old who were attending the third year of middle school (III de la ESO) in a peripheral neighborhood of Orcasitas in Madrid. The intervention relied on the optional school subject of "theatre" that hosted the art educator and researcher and the first author of this article, to implement a "class project" not tied to improving any curricular content but aimed at addressing an emerging need—as identified by the teachers responsible for the theatre classes—of educating pupils to express their emotions. The "theatre" subject was taught for two hours per week as part of the annual curriculum. When the class project began in February 2023, the pupils had only completed the first semester of the theatre course and were at a beginner's level in the performing arts. Additional hours were allocated for the class project by borrowing time from physical education and Spanish language classes.

Research Methods

An exploratory approach was used for arts-based action research (Coghlan & Brydon-Miller, 2014) through an art educational workshop based on embodied methods and activities in a secondary school classroom. Coupled with action research, artistic processes aim to improve a situation and follow the logic of *planning-implementation-reflection* cycles for re-orienting the processes towards the goals while the research is ongoing as opposed to after its completion.

The research instruments were of two kinds: pupil journal responses based on an open questionnaire and a final focus group. The questionnaire, completed by the students during the last five minutes of each class throughout the project, aimed to provoke participation in the research and gather data about students' experiences and emotions about the learning process. It was built by highlighting a technical foundation of movement-based performing arts, i.e., the mutual interdependence between three layers:

- movement vocabulary (Ferrari, 2015) that relates to different movement patterns, techniques, and protocols;
- bodily resonances (Ferrari, 2015)—made out of sensations, emotions, and images (Laban, 2011)—as kinaesthetic responses to a stimulus; and
- embodied reflection about the learning happening through the connections between the first two layers. Learning here is intended in a broad sense beyond the technical and artistic outcomes, including unpredictable outcomes (Fenwick, 2015).

The questionnaire included three open questions that built upon one another and put the three layers in a relationship:

1. “What did I do with my body today?” aimed at provoking reflection on movement experience and cultivating kinaesthetic awareness.
2. “What did I feel and imagine while moving?” is aimed at reflecting on the experience of both the imaginative and affective dimensions of self-movement and connecting pre-reflective to the reflective level.
3. “What did I learn with my body today?” aimed at eliciting pupils' perspectives on the experiences of embodied activities and learning.

Although these three layers (movement vocabulary, bodily resonances, and embodied reflection) and questions occur simultaneously during performing practice, inside the instrument, the questions are presented in a progressive order to encourage students to engage in meta-reflection, considering how each layer contributes to the overall learning experience in movement-based performing arts.

Procedures

The workshop consisted of approximately 20 hours of lessons over seven weeks between February and March 2023, with two weekly encounters: one lasting two hours and the other lasting one hour, totaling three hours per week. The workshop content included selected movement-based performing arts techniques applied to devising a performance on the topic of “emotions,” which was performed by the participants for an audience of approximately 30 schoolmates. The creative material of the performance was generated by the bodily responses of the performer to the topic of “emotions,” valuing their embodied knowledge—“what they know”—based on their experience, as opposed to “what is known” (Barba, 1995) about emotions. The body’s point of view is typically silenced as a source of knowledge in culture and education: addressing the body’s point of view means building knowledge upon personal experiences and giving voice to a highly personal perspective about a given topic that might add deeper insights beyond, behind and aside what one has learned about the same topic through verbal language, which often reflects culturally hegemonic views (Cappello 2018). The devising process relied upon non-representational embodied activities based on “movement tasks” adopting verbal cues rather than on “practising a set teacher- initiated movement” (Tinning, 2010, p. 54) in order to encourage personal exploration of the topic through kinaesthetic imagination.

Each class consisted of three parts: warm-up, creative movement exploration and composition, and reflection, as outlined in the table below.

Table 1

Body as Classroom: Table of Activities

Phase	Name	Content	Aim
Part 1: Warm Up	<i>“Walking/Stopping”</i>	The class was split into two groups: audience and performers. Performers walked while three stood still. An individual and group balance had to be reached between staying still and walking.	Introduce the kinesthetic aspects of attention, interaction, and attitude of bodily responsiveness to each other’s actions.
	<i>“The ball”</i>	Pupils made a circle and had to launch a tennis ball at each other to find a sensation of flow by searching for a common rhythm.	
	<i>“Finger contact”</i>	In couples, pupils maintain bodily contact through their fingers and	

Phase	Name	Content	Aim
		move together through the room. First, one partner leads explicitly. Then, the other partner leads. Finally, both move together, leading simultaneously without making it obvious who is directing the movement.	
Part 2: Creative Movement Exploration and Composition	<i>“Imaginary ball”</i>	In a circle, participants launched and caught an imaginary ball. With each new launch, participants had the possibility to transform the ball’s physical features	Introduce the interconnection between physical features and movement patterns in objects.
	<i>“Gestures for colors”</i>	Pupils responded with abstract gestures to the name of colors.	Introduce the kinesthetic aspect of perception in different sensorial fields (such as vision) and explore personal kinesthetic imagery related to colors.
	<i>“Happiness statue”</i>	Each pupil made a statue with their body to represent their happiest moment.	Introduce the impact of physical movement on memory and emotion.
	<i>“You don’t get up”</i>	In couples, one person (A) lay on the floor while their partner (B) stood nearby in any position they chose. A’s aim was to stand up. Each time A tried to stand up, B could touch any part of A’s body, causing A to return to the floor. Once A successfully stood, the couple switched roles.	Introduce how the feelings of power and disempowerment in relationships intersect with movement.
	<i>“Photocall”</i>	Embodying different postures, the class built a photo of different places, such as the beach, the classroom, a basketball match, etc. They added a sound and a	Introduce the experience of kinesthetic reaction to spaces and places.

Phase	Name	Content	Aim
		movement to bring the photo to life.	
	<i>“The bottle”</i>	With eyes closed, a person searched for a bottle in the room while the rest of the group made a circle around the person, looking after them and supporting them by sending them an energy of focused attention.	Introduce the experience of the influence of intuition and imagination on movement and the other way around, the influence of movement on intuition and imagination
	<i>“The knot”</i>	A performer had to sit in a chair in front of the audience and attempt to untie an impossible knot without breaking eye contact with them throughout the performance.	Introduce the impact of emotion on doing a task and explore frustration as a part of the devising process and as a legitimate response to the treated topic.
	<i>“Scale of feelings”</i>	Four participants stood on one side of the room, facing the audience, each assigned a specific emotion (such as “jealousy,” “love,” “disgust,” etc.). As they walked toward the audience, they gradually intensified their expression of emotion with each step, progressing from level 1 to level 10 in both emotional intensity and physical involvement.	Introduce the experience of the interplays between emotions and imagination, as well as intra-corporeal and extra-corporeal movement.
	<i>“Gestures for actions”</i>	Pupils responded freely with a gesture to each of the following actions and words: “hitting,” “being hit,” “staggering,” and “falling.” They played with different levels of intensity, abstraction, and orientation to corporeal space while improvising a short speech about what they had for breakfast.	Introduce an experience of the interplays between action, emotions, and imagination, as well as intra-corporeal and extra-corporeal movement. Offer tools for intuitive embodied analysis of movement.

Phase	Name	Content	Aim
	<i>"The object"</i>	Participants brought an object that symbolized "friendship," and they embodied it, performing a chosen change of state (e.g., from solid to liquid, from liquid to air, etc.).	Introduce the experience of the influence of physical movement on imagination through empathy.
Part 3: Reflection	Verbal reflection at the end of each activity.	At the end of each activity, pupils shared their experiences verbally.	Providing tools for reflecting on embodiment and creating dramaturgical links between the approached topic (emotions) and the performers' experience, both on a pre-reflective and reflective level, highlighting a concrete perspective underlying the devising process.

Ethical Considerations

The research process was carried out with the previous authorization of the teachers and students involved, who were informed about the study's objectives and the conditions of participation, ensuring anonymity (students wrote through pseudonyms).

Analysis and Results

The data were treated through an open—not theory-driven—thematic analysis and the lens of interpretive inquiry (Díaz-Barriga & Domínguez Castillo, 2017). Student diaries and focus group responses were transcribed into a total of 17 pages. Recurring topics were sought and grouped into three themes according to the research questions. We looked first at emotions and experiences in RQ1, and then, through that analysis, we proceeded toward RQ2, focusing on what forms of learning took place. Thus, what the pupils reported as "results" or contents of their learning was not relevant here. Initially, we identified three topics in the students' responses:

- *strange, weird, and new movements* (from now on, *the strange*) referred to the movement experiences students had;
- *emotions, feelings, and sensations* (from now on, *the emotive*), focused on what students felt in reaction to moving in certain ways; and

- *creativity, imagination, and expression* (from now on, *the imaginative*) included responses by students related to both learning and experiencing such topics through movement.

Next, we started looking for themes to find deeper meanings that the pupils' responses might generate. The themes were found by combining or clustering topics in different ways and considering possible mutual interactions between them. Through this process, three themes emerged.

The first theme, *Stepping Towards the Unknown*, emerged by combining the topic of *the strange* with *the emotive*, and it showed how pupils, who, at first, resisted because of unpleasant feelings, little by little gained the courage to try new and strange movements leading to a change in their habits of mind. By combining *the emotive* with *the imaginative*, another theme emerged: *Towards Holistic Engagement*. This theme illuminated how encountering emotions through creative movement leads pupils to become actively and more fully engaged in embodied activities. The third theme, *Towards Embodied Agency*, combined *the strange* with *the imaginative* and pointed at how expanding pupils' movement repertoire could support breaking both habits of movement and mind and encourage the pupils to further explore their expressive potential. This, again, may lead to increased spontaneity, creativity, and embodied agency. We will closely examine each theme, providing short examples of data collected under the included topics.

Transformative learning was not initially part of the theoretical framework; we integrated it because the data analysis suggested that it might be essential in analyzing and interpreting the results.

Theme One: Stepping Towards the Unknown

As discussed above, we arrived at this theme by looking at the topics of *the strange* and *the emotive*. We interpreted these topics as an entry point to an explorative dimension of movement. Instructions encouraged a personal movement response from students to a creative task (Tinning, 2010), and they implied a vision of movement that was inquiry-based and challenged the dominant representative and naturalistic idea of movement. Students labeled the creative movement as *weird*, as expressed by the following student: "When we did something while standing [bodily statues and photos of activities done in places], it was weird, as it was new for me." This sentiment potentially emerged because it was a new experience with an approach that remains marginal to physical education as taught in schools.

Creative movement explorations generated different emotions and feelings among students. As resistance towards the reviewing of one's assumptions against the dilemma of considering

movement as an epistemic field in its own right (Spatz, 2015), in the beginning, “edge-emotions” (Mälkki, 2011, p. 31) were prevalent, as evidenced in the following two pupil responses: “We played the fool. [I felt] boredom and I know that it [the activity] is not useful for me. [I felt] despair for losing classes that I like” and “I felt a lot of embarrassment and a lot of boredom.”

Gradually, *curiosity* about movement exploration aroused, promising a relief from unpleasant emotions: “When a peer had to guide me with his finger, I felt curiosity but also embarrassment, at the same time, because it was new for me.” Edge-emotions such as *embarrassment* decreased, and pupils looked at movement exploration more as an attractive dimension that gave rise to more positive feelings, as evidenced in the following two participant quotations: “I felt calmness, [emotional] wellbeing, and I didn’t feel embarrassment when doing those things. [I felt] very happy and feeling [emotional] wellbeing,” and “[while performing], I felt good and with a little shame.”

This theme shows how, through the classes, students passed from masking crisis beyond edge-emotions and from reaffirming their set of meanings to stepping outside their comfort zone. Through curiosity instilled by the kind of movement practice based on open and inquiry-based instructions and encouraging them to step towards the unknown, pupils accepted all of their feelings as a phenomenon tied to learning and moving. Students embraced the exploration of both movement and its emotional aspects in learning, and this led to a gradual dissolution of uncomfortable feelings towards the enjoyment of the embodied dimension of both learning and moving, bringing emotions of fulfillment (Anttila et al., 2019; Cañabate et al., 2020).

Theme Two: Towards Holistic Engagement

In turn, combining the topic of *the emotive* with *the imaginative* points to how the classes challenged a disembodied conception of both movement and feelings. When the body is commonly conceived as a machine, emotions are not considered an element of movement (Sheets-Johnstone, 2019). As a pupil said, “performing an emotion” and moving while feeling is something pupils “do not normally do.” Further, the pupil described:

I felt strange, for example, because it [creative movement] is something that is out of the normality to do that. We have done many things; we gesticulated in a different way, when we had to perform an emotion, we have done it. This is something that we do not normally do.

The very fact of feeling emotions stemming from movement and bodily activity—as explicitly framed by the embodied activities—felt *strange* to students as it was not usual for them to pay attention to the bodily dimension of their emotions and movement in connection with

emotions implied moving “in a different way” because it pointed to the affective dimension of movement (Sheets-Johnstone, 2018). Paying attention to the bodily dimension of emotions is not part of both practice and set-of-meanings of students, which are torn apart from feeling—and their bodily experience—as something that is not useful for learning (see Anttila, 2015). While carrying edge-emotions, such as feeling strange, movements carried other kinds of emotional resonances as creative material generated through the embodied activities. Pupils recognized the corresponding emotional responses to different kinds of movement patterns (Laban, 2011; Zarrilli, 2002) and emotions as an inherent dimension of movement, interdependent from it, exploring the correspondences between movement polarities and emotional polarities.² For example, one student wrote: “I felt inferiority, despair (when I was down), while I felt power and superiority (when I was up). This reminded me of an experience in which I felt like that,” and “When I was untying the knot, I felt despair and stress. And I imagined uncomfortable situations.”

Resonances opened up different memories, imagination, and associations and facilitated a creative analysis of students’ lived reality (Anttila, 2018; Lecoq, 2022). These affirmations seem to support considering movement as a constraint that heightens imagination’s epistemic relevance (Rucińska & Gallagher, 2021). These statements seem to highlight the function that movement has in reflection using image schemata (Johnson, 1987) that serve on an abstract level as a metaphorical understanding of reality concerning movement experience. Engaging with emotions opened up a holistic learning dimension, connecting non-symbolic contents with symbolic meanings (Anttila, 2015) and shedding light on cultural issues. While pupils accepted emotions and images as a possible dimension of movement, a creative dimension of movement was revealed to them. Beyond embarrassment, feeling in movement became a means for self-expression (and learning about oneself): “I have improved in expressing myself better and not being ashamed.”

The instructions that were given in the classes aimed at facilitating experiences of connection between feeling and images by emphasizing their embodied dimension to elicit the development of individual creativity through movement. Imagination, as a kinaesthetic response to a stimulus, depends on the affective dimension of movement, which is personal: creative self-movement awakened with emotions, memories, and images stored in the sensory-motor circuits. When recalled by movement, images arouse with ease from their affective-kinaesthetic footprint, outlining the diverse landscapes of the pupil’s imagination as a part of their unique understanding of reality: “In the project, when we performed the action

² Helena Ferrari “Expresión Corporal: Course” Physical Theatre, (Madrid, RESAD, 2012), Studio Training.

of staggering, and we had to fall, I noticed that there were people who performed it in one way and other people who did it in another.” Another pupil wrote,

I saw that even when receiving the same input and task for performing, I was doing something completely different from what A [the pupil’s peer] was doing. It was funny to me because you saw what other people had done, and you said, “Wow, that hadn’t crossed my mind.”

Here, we see a transformation from the view of the body as a machine and movement as non-affective and non-imaginative towards welcoming emotions and images as partners in moving. This may lead to new kinds of learning, where movement, emotions, and imagination are partners in learning (Jusslin et al., 2022). Pupils started to consider creative movement as a way to express themselves and to read others’ emotions and imaginaries. By noticing the difference between each one’s imagination and emotions as reflected in different movements, pupils started to consider embodied resonances as a phenomenon related to movement and learning. Students engaged with the raw material of the creative process—bodily resonances—as a holistic dimension of learning, where one could learn from an entire world vision beyond others’ expressions. At the same time, holistic engagement opened movement as a space for performing difference, understanding, and empathizing with it (Anttila et al., 2019).

Theme Three: Towards Embodied Agency

This theme emerged by combining the topics of *the strange* with *the imaginative*. Here, we see how the development of creativity may happen by breaking habitual movement, that is, when the human body operates like a machine (Sheets-Johnstone, 2011), and movement is an automatic function based on mindless and unaware repetition. The instructions aimed at generating new movements to open students’ movement registers to wider expressive possibilities (Ferrari, 2015). As one pupil noted, “We did inhuman movements and strange statues.”

In this case, the movement felt *inhuman* because it surpassed normativity and the naturalistic idea of human performativity and what a human body can do. Movements felt strange, probably also because, by intentionally calling for emotions, they changed one’s relationship to self-movement by adding new information—experiencing and performing feeling as a kind of motor know-how—that might have provoked changes in perception (Noë, 2004). Strange movement was a tool to give rise to new movements by encouraging non-habitual bodily responses toward developing a personal movement language. A pupil describes this process in the following way:

[I discovered] creativity. For example, when we were making the statues [of happy moments], many people, as always, imagined the first things that they remembered. For example, football, and at the end, they did other kinds of performances, poses and gestures, you know, not always the same ones. And I think that this is like creativity.

Strange movement worked to expand one's imagination by actualizing new movement possibilities, leading to *the imaginative*. Creative movement does not build upon rationality, but it draws, as Garre frequently said, on "awareness of intuition" as the keystone of imagination, and it requires going beyond automatized responses, following intuition beyond the rationalization of movement and its censorship.

[I was asking myself] do I make this gesture or another? But someone else has already done it! So now, what do I do? It was more like improvising. It was more complicated. You had to think more about yourself. I already did this gesture...

Developing creativity implies rejecting the first responses in order to go deeper into more authentic images (Chekhov, 2015), following the inherent logic of imagination and its sense of truth (which, on a physical level, feels like satisfaction) points at non-habitual movement as a door to agency and spontaneity. Beyond their experience and idea of automatic movement, students seemed to discover their agency, spontaneity, and essence as animate beings (Sheets-Johnstone, 2011). New and strange movements were both a way to expand students' movement repertoire beyond habits and a way to think more about themselves (Anttila, 2015). It was also a way to embody their agency, rehearsing diverse performativities (Anttila et al., 2019) to choose movements more resonant with expressing themselves, choosing creativity beyond repetition.

Conclusions

As stated at the beginning of this article, our research is motivated by the need to imagine sustainable futures (La Casa Encendida, 2022) and to be co-creators of it (Haraway, 2016). This greater purpose has been the backdrop of this study on secondary school pupils' learning experiences in movement-based performing arts, focusing on kinaesthetic imagination. In our initial reading of pupils' accounts of their learning experiences and emotional responses to physical, creative activities, we saw a change from resistance to curiosity, a kind of opening. This process started from experiencing uncomfortable emotions (edge-emotions) and, through stepping outside the comfort-zone, proceeded towards shifts in their "habits-of-mind." By interpreting the data from pupils, we interpret that the course may have enhanced transformative learning. This process of change and transformation happened through embodied activity, encouraging pupils to go beyond their prejudices and judgments about learning, movement, and the body. Thus, transformative learning, in this case, can also be

seen as a form of embodied learning. As shown in the theme *Stepping Towards the Unknown*, students passed from a representational idea (Fenwick, 2015) of movement to an explorative one by accepting movement as an epistemic field in which they can step towards the unknown in both moving and learning, with enjoyment. As shown in the theme, *Towards a Holistic Engagement*, students left behind their rejection of emotions in both moving and learning processes, and they integrated the affective-kinaesthetic dimension of movement to nourish their learning by connecting non-symbolic to symbolic aspects of movement and by establishing a dialogue between one's and others' embodied analysis of reality as self-expression. The theme *Towards Embodied Agency* suggests that during the classes, pupils left behind their idea of movement as automatic and repetitive, and they rediscovered spontaneity and creativity in movement as entry points to embody their creative potential toward searching for and actualizing diverse forms of self-expression.

We conclude that the kind of learning that seems to have happened could be labeled as embodied transformative learning and that movement-based performing arts classes that focus on kinaesthetic imagination seem to enhance this kind of learning. The classes accompanied pupils in experiencing movement as a step towards the unknown, holistic engagement, and embodied agency. Throughout the classes, movement became progressively relevant for students as an ally in emancipation, empowerment, self-directedness, autonomous thinking, and taking control of one's own life (Mälkki, 2011), as they are rooted in the bodily blueprint of knowing and learning. Our research also suggests that transformative learning, usually associated with adult learning, can also be relevant to young, school-aged students through embodiment and kinaesthetic imagination. As we could see through our analysis, kinaesthetic imagination promotes reflection through three strategies (Mälkki, 2011):

- welcoming challenging points of view through embodied practice;
- emphasizing the necessary incompleteness appearing when one is questioning one's assumptions through the devising process; and
- providing ideas and experiences about how edge-emotions might serve as gatekeepers towards reflection.

Movement-based performing arts techniques and the concept of kinaesthetic imagination seem to offer key support when it comes to grounding the education of creativity into an embodied pedagogy, facilitating the connection between embodied learning and classroom practice in transformative ways.

We conclude that in order to develop school cultures that work towards sustainable futures, pedagogical approaches based on embodied transformative learning are needed and that movement-based performing arts are one potential approach in this endeavor.

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About the Authors

Nicoletta Cappello (she/her) is a performer, dramaturg, director, and art-pedagogue, and currently a Doctoral Researcher in cotutelle between the University of Catania and the University of Girona now visiting the Artistic Doctorate in Performing Arts at the University of the Arts Helsinki. She has taught Acting in Physical Theatre at the Royal School of Dramatic Arts in Madrid. She has designed and led art education in collaboration with PLANEA-Art and School Network, lectured at the European Cultural Centre for Performance Art, and gave masterclasses at Universidad Francisco de Vitoria, University of Bologna, and Universidad Complutense of Madrid, among others. She is the artistic director of “El público,” a performance and education company focusing on participatory, interactive, and

immersive practices. Her shows have been awarded different prizes for contemporary creation, such as a Carlota Soldevila Award from Teatre Lliure Barcelona and Premi Born Menorca, among others. She has presented her pieces in venues like Teatro de La Abadía, Matadero Madrid, and Fabra i Coats Barcelona.

Eeva Anttila (Doctor of Arts, EdLic) works as a professor in dance pedagogy at the Theatre Academy of the University of the Arts Helsinki, Finland, and leads the MA program for dance pedagogy. Her research interests include dialogical and critical dance pedagogy, embodied learning, embodied knowledge, and practice-based/artistic research methods. Anttila is actively involved in national and international dance and arts education organizations and journals. She served as the chair of Dance and the Child International (2009–2012) and has published several articles and book chapters nationally and internationally. She was involved in the ARTSEQUAL -research project (2015-2021) as an Arts@School team leader and Visions group member. Currently, she leads the ELLA, a research project funded by KONE. She is a member of the steering group of Uniarts Research Institute, a founding member of CERADA (Center for Educational Research and Academic Development) of Uniarts, and a founding member of the Observatory of Arts and Cultural Education, Finland.

Dolors Cañabate is an associate professor at the University of Girona in the area of didactics of body expression. She holds a doctorate in Education and Psychology from the UdG. She graduated in physical education (UB) and has a postgraduate degree in values education. She is affiliated with the Department of Specific Didactics in the Faculty of Education and Psychology and director of the movement and languages chair at the University of Girona. She is the principal investigator of the research group (GREPAI) in education, heritage, and intermedia arts and a member of the Educational Research Institute. Its lines of research are didactics of physical education, teacher training, teaching and learning processes in physical education, psychomotor skills, and dance, teacher training, teaching and sustainable methodologies, cooperative and reflective learning. Cañabate is the coordinator of physical education mentioned in the primary, infant, and double-degree teacher degrees and is responsible for the area and coordinator of the Teaching Innovation Network on Cooperative Learning of the University of Girona and the National Network on Cooperative Learning.

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