



Embodied Knowledge in Practice: Participatory Approaches to Learning, Research, and Collective Meaning-Making

Eleni Tsompanaki

University of Thessaly, Greece

Abstract

This presentation explores the body as a generative site of knowledge in educational and research contexts, foregrounding embodied, participatory, and collaborative approaches to teaching and inquiry. Drawing on practice-based research from dance, community arts, and arts-informed pedagogy, the session demonstrates how learning emerges through movement, aesthesis, dialogue, and collective reflection. Drawing upon more than ten years of teaching experience in a university pedagogical department, the presentation examines embodied knowledge as pedagogical practice and demonstrates how participatory, movement-based approaches can support learning, critical thinking, and inclusion in educational settings. It argues that the body is not merely a vehicle for learning but a primary site of inquiry, meaning making, and knowledge production. Beginning with brief participatory movement activities, participants were invited to experience how bodily dynamics communicate emotional and cognitive states. This experiential entry point illustrates how embodied practices make internal experiences visible, shared, and collectively interpreted. The presentation discusses applications of embodied learning across disciplines, including mathematics, history, language, literature and more. Through movement, learners engage with spatial reasoning, historical understanding, textual interpretation, and creative problem-solving. Examples drawn from teaching practice demonstrate how embodied approaches foster participation, agency, and the co-construction of knowledge. The insights presented emerge from long-term engagement with undergraduate students and sustained observation of how learners respond to participatory approaches. The presentation draws upon reflective practice and accumulated pedagogical experience as forms of professional knowledge. Recurring patterns of engagement, collaboration, confidence, and creative participation have informed the development of these practices.

Keywords: Embodied knowledge, Participatory learning, Arts-informed pedagogy, Inclusive education, community dance

1 Introduction

In contemporary higher education, learning is still largely structured around cognitive, text-based, and abstract modes of knowledge transmission. University spaces historically prioritize disembodied, rationalist paradigms that view theoretical knowledge as the primary indicator of rigorous academic practice, leaving educators with limited structural support for bodily engagement (Allen-Kelley, 2025). However, increasing attention is being given to embodied, participatory, and arts-informed pedagogies that position the body not as an auxiliary tool for learning, but as a primary site of perception, meaning-making, and knowledge production. Integrating arts-based and sensory practices positions the body and its emotional/affective responses as legitimate epistemological resources that actively disrupt dominant text-centric narratives (Fu, 2026; Jusslin et al., 2024). This paper contributes to this emerging field by offering a practice-based reflection on embodied pedagogy developed through sustained teaching experience in teacher education.

Rather than presenting findings from a formal empirical study, this work draws on a decade of continuous pedagogical practice within a university department of early childhood education. It is grounded in reflective practitioner inquiry and accumulated pedagogical knowledge developed through iterative course design, classroom experimentation, and long-term engagement with undergraduate students. Over time, this sustained engagement has enabled the identification of recurring patterns in how learners respond to movement-based, participatory learning environments, particularly in relation to agency, collaboration, confidence, and creative expression.

The central premise of this paper is that the body is not simply a medium through which learning is expressed, but a generative site of inquiry through which knowledge emerges. Embodied learning is understood here as a relational and participatory process in which meaning is co-constructed through movement, interaction, and aesthetic experience (Merleau-Ponty, 1962; Lakoff & Johnson, 1999). This perspective aligns with broader developments in embodied cognition and arts-based education, while extending them through situated pedagogical practice. This maps directly onto self-study and practitioner action research models where teacher educators explicitly implement somatic methods to help preservice teachers unlearn strict cognitive biases and ground their changing identities in lived, physical reflection (Klein et al., 2019; Murphy, 2024).

The context for this work is a series of higher education courses in which movement, dance-based practices, and embodied exploration are integrated into teacher education curricula. Within these settings, students are invited to engage with disciplinary content, such as mathematics, history, language, and literature, through movement-based inquiry and collaborative meaning-making processes. These experiences have consistently revealed how embodied engagement can open alternative pathways to understanding, especially in relation to spatial reasoning, narrative interpretation, and conceptual thinking and more.

In positioning teaching as a form of knowledge production, this paper argues for the recognition of long-term pedagogical practice as a legitimate epistemic contribution. In an educational landscape increasingly shaped by standardization, digital mediation, and artificial intelligence, embodied and participatory approaches offer critical opportunities to re-center human presence, relationality, and sensory engagement in learning processes.

2 Literature Review

This paper is situated within a constellation of theoretical perspectives that reconceptualise learning as an embodied, relational, and situated process. Rather than treating knowledge as

abstract, decontextualised information, these approaches emphasise the inseparability of cognition, perception, and bodily experience. Within this view, the body is not external to thinking but constitutive of it, forming the ground through which meaning is generated and understood.

Central to this framing is the concept of embodied cognition, which challenges traditional dualisms between mind and body. From this perspective, cognitive processes are shaped by sensorimotor engagement with the environment, suggesting that thinking emerges through interaction rather than detached reflection (Dewey, 1933). In educational contexts, this implies that learning is fundamentally linked to movement, perception, and lived experience (Heyang & Martin, 2020; LaGasse & Hickie, 2015; Pilgrim et al., 2020; Plevin & Yu Zhou, 2020). Complementing this is the field of arts-based and aesthetic education, which positions artistic practice as a mode of inquiry. Here, knowledge is not only communicated but produced through aesthetic engagement, including movement, improvisation, and sensory exploration (Ryan, 2014; Sajnani et al., 2020). Aesthetic experience is understood as a form of attentiveness that enables learners to perceive, interpret, and reconfigure their relationship to knowledge (O'Neil et al., 2019; Stinson, 1995).

This paper also draws on participatory and dialogic pedagogies, which emphasise co-construction of knowledge through relational processes. In these frameworks, learning is understood as emerging within interaction rather than being transmitted from teacher to learner (Powell, 2025). Such approaches challenge hierarchical models of education and instead foreground shared agency, collective meaning-making, and distributed expertise (Freire, 1970; Erdal & Strømsø, 2018). In addition, the work is informed by reflective practice and practitioner inquiry, which recognises professional practice as a site of knowledge production. Within this tradition, sustained teaching experience becomes a legitimate form of inquiry, where understanding is developed through iterative action, reflection, and adaptation over time (Tachie, 2024). Therefore, the dance and movement expression in education modules were mainly practice-based and were framed by methods that promote participant's personality, interaction, learning maturity, responsibility, critical thinking and analytical view, with emphasis on democracy and self-action (Tsompanaki & Magos, 2022).

Recent developments in embodied pedagogy further extend these perspectives by engaging with posthuman and socio-material approaches to learning, which emphasise the distributed and relational nature of cognition across bodies, spaces, and material environments (Fenwick, 2015; Barad, 2007). Within this framing, learning is understood as emerging through entangled human and more-than-human interactions, challenging individualised and purely cognitive models of knowledge acquisition (Ainscow, 2020).

In parallel, critical disability studies and inclusive pedagogy scholarship have increasingly foregrounded embodiment as central to rethinking access, agency, and epistemic justice in education (Anttila, 2015; Goodley, 2017; Dolmage, 2017). Rather than positioning disability or difference as deficit to be accommodated, these perspectives conceptualise diversity as constitutive of knowledge production itself. This shift aligns with pedagogical approaches that prioritise relationality, accessibility, and the multiplicity of ways in which learners can participate in meaning-making processes.

Community dance allows these intrinsic values of art when applied to education. Thus, it opens possibilities for self-awareness and development, as its aim is to develop the individual socially, psychologically, mentally, emotionally, cognitively through physical commitment (Amans, 2008). Community dance, that utilises creative movement, can be applied to individuals where they are bound to dance regardless of abilities, age, gender, perception and

various beliefs (Barbour, 2016). Altogether, these theoretical perspectives support an understanding of embodied pedagogy as both a method and an epistemological orientation (Anttila, 2015). They frame knowledge not as static content but as an emergent, situated, and relational process. In this sense, embodied learning is not simply an alternative approach to education, but an orientation that invites a reconceptualisation of how learning is conceptualised, enacted, and shared (Anttila, 2015).

Consequently, teacher education through embodiment is grounded in a different understanding of how knowledge domains are approached, presented, and analysed within education (Shapiro, 2019). For this reason, a creative approach to dance in education provides teachers with opportunities for embodied and experiential learning, while also enriching their pedagogical repertoire and teaching materials, thereby offering an exploratory and holistic perspective on the learning process (Beardall, 2017; Magos and Tsouvala, 2011). It introduces an alternative way of investigating subject matter, drawing on the pedagogical potential of dance as an artistic practice in education. Furthermore, it promotes a holistic approach aimed at enabling teachers to communicate, collaborate, express themselves, evaluate, critically reflect, question and make judgements, develop critical thinking and empathy, foster creativity, embrace difference, and engage in analysis and enjoyment of learning through embodied and experiential processes (Anttila, 2015).

3 Methodological Position

This paper is situated within the methodological tradition of practitioner inquiry and reflective practice, which recognizes teaching itself as a legitimate site of systematic professional knowledge generation (Schön, 1983; Cochran-Smith & Lytle, 2009; Loughran, 2002). Rather than reporting findings from a discrete empirical study, the paper presents a theoretically informed analysis of pedagogical insights that have emerged through more than ten years of sustained teaching practice in undergraduate teacher education. The aim is not to produce generalizable findings but to critically examine how embodied and participatory pedagogies contribute to learning, knowledge production, and inclusion within a specific educational context. Within this framework, learning is defined as an embodied, situated, and participatory process rather than the acquisition of abstract knowledge detached from lived experience (Dewey, 1938; Merleau-Ponty, 1962; Kolb, 1984).

The pedagogical context comprises undergraduate courses in dance, movement, and creative expression within the university department of early childhood education, in Greece. Across this period, embodied and arts-informed approaches have been systematically integrated into the curriculum through creative movement, community dance, collaborative performance, reflective dialogue, and participatory inquiry. Approximately 80-120 undergraduate students (1st-4th year of studies) participate in these courses each academic year. Within these three-hour weekly classes, embodied and arts-informed approaches are systematically integrated into the curriculum through creative movement, community dance, collaborative performance, reflective dialogue, and participatory inquiry.

Learning activities are grounded in Experiential Learning Theory (Kolb, 1984), which positions learning as a continuous process where knowledge is created through the transformation of experience via concrete exploration, reflective observation, conceptual understanding, and active experimentation. Rather than treating movement as an instructional supplement, bodily engagement serves as the primary mode through which students investigate educational concepts, construct meaning, and reflect upon their developing professional identities (Barbour, 2016). This perspective is further informed by embodied learning, which recognizes that cognition is fundamentally shaped through the reciprocal

interaction of body, mind, environment, and social relationships (Varela et al., 1991; Shapiro, 2019).

Each class is structured to minimize hierarchical separation between teacher and learners, aligning with social constructivist perspectives where meaning is co-constructed within a community of practice (Vygotsky, 1978). Furthermore, community dance principles shape the environment by positioning dance not primarily as artistic performance, but as a participatory social practice that promotes inclusion, dialogue, belonging, and democratic participation (Ainscow, 2020; Amans, 2008). Throughout the courses, students participate in studio-based learning, interdisciplinary events, public performances, community projects, and collaborative artistic interventions that provide authentic contexts to test and refine theoretical ideas.

To systematically examine this ten-year corpus of practice, this analysis is guided by the following research questions:

1. What recurring patterns of learning and participation emerge from students' experiences of embodied pedagogies in undergraduate teacher education?
2. How do students describe their learning experiences through embodied pedagogical practices?
3. How do these recurring insights inform understandings of embodied knowledge, participation, and inclusive pedagogy?

3.1 Data Sources

The analysis draws upon multiple sources of pedagogical documentation accumulated over successive teaching cycles. Although these materials were originally generated within routine teaching practice to inform ongoing curriculum redesign rather than a predetermined research design, together they constitute a rich, longitudinal corpus of practitioner-generated evidence. Their value lies in revealing recurring pedagogical patterns rather than measuring predetermined outcomes. Throughout the courses, students participate not only in studio-based learning but also in interdisciplinary events, public performances, community projects, and collaborative artistic interventions. These experiences provide authentic contexts in which theoretical ideas can be explored, tested, and refined through direct participation.

- Students' reflective portfolios and journals produced as part of course assessment, documenting connections between embodied experiences, educational theory, and professional learning.
- Teaching journals and field notes recorded by the educator during and immediately following teaching sessions.
- Classroom observations and pedagogical memos documenting critical incidents, student interactions, and curriculum adaptations.
- Anonymous course evaluations providing students' retrospective reflections on their learning experiences.
- Photographic and video documentation from performances and interventions used as practice and art-based methods to support pedagogical reflection and curriculum development.

Portfolios: Throughout the courses, students completed reflective portfolios as part of the assessment process. These included written reflections on embodied learning experiences, documentation of movement explorations, connections between theory and practice, and critical reflections on their developing pedagogical understanding and experiences. Portfolios

were submitted digitally at the end of each teaching unit and constituted part of the regular course assessment.

Teacher's journal/field notes: Reflective teaching journals and field notes were maintained following each teaching session to document structured exercises and improvisations, lessons' plan, pedagogical observations, emerging questions, and adaptations to subsequent teaching. All movement activities described below form part of regular university teaching and are only a few examples.

Classroom observations: Notes were kept after each class on pedagogical decisions, critical incidents, unexpected responses, adaptations, teacher's personal reflections. Classroom interactions, participation patterns, group dynamics, non-verbal behaviours were also observed.

Anonymous course evaluations: At the end of each semester, students are invited to write their perceptions of the course, teachers, impact, challenges, valuable experiences and less valuable experiences. This procedure is anonymous and addressed to each module. Teachers are then given the results as feedback for their work. This procedure is organized by MODIP - quality assurance unit, the main body in charge of coordinating quality assurance procedures and the university's work assessment.

Photos/videos: Photographic and video documentation were used as complementary sources of pedagogical evidence to support reflective analysis. Rather than serving as data for formal movement analysis, these materials enabled the researcher to revisit classroom organisation, patterns of participation, collaborative interactions, and the spatial dynamics of learning activities, thereby enriching the interpretation of recurring pedagogical themes identified across other sources of documentation.

Taken together, these sources provided complementary perspectives on students' learning experiences and the pedagogical process. Rather than being considered independently, they were examined collectively to identify convergences and recurring patterns across different forms of documentation. For example, students' reflective portfolios frequently described increased confidence and deeper engagement with learning through movement, while teaching journals documented growing willingness to take creative risks and participate more actively in collaborative tasks. Similarly, anonymous course evaluations highlighted experiences of psychological safety and inclusion. The convergence of these observations across multiple sources informed the development of broader interpretive themes, such as agency, participation, embodied understanding, and collective meaning-making.

3.2 Analysis

Analysis followed the six-phase Reflexive Thematic Analysis (RTA) framework outlined by Braun and Clarke (2021). This approach was selected because it treats the researcher's subjectivity and deep immersion in the field not as a methodological bias to be controlled, but as the primary interpretive tool through which knowledge is generated. The analytic process began with *Phase 1* (familiarization with the data), which involved deep immersion in the documentation corpus. Student portfolios, teaching journals, field notes, classroom observations, performances' videos and photographs and anonymous course evaluations were read and reread across successive teaching cycles to build an organic, holistic familiarity with the text and materials. This was followed by *Phase 2* (generating initial codes), where an inductive, open coding process was applied across the entire data corpus. Initial codes were generated directly from the participants' expressions, behaviors, and documented pedagogical incidents, capturing meaningful units of data without forcing them into pre-existing categories.

The analysis progressed to *Phase 3* (constructing potential themes), where the initial codes were clustered into broader provisional patterns based on shared conceptual meanings. Analysis at this stage focused on how these clustered codes addressed central issues of student engagement, agency, collaboration, confidence, inclusion, and collective meaning-making. During *Phase 4* (reviewing potential themes), these candidate themes were checked against both the coded extracts and the entire dataset to ensure they formed a coherent narrative. By comparing documentation across diverse student cohorts and varying data types, this phase sought to construct a multi-faceted, rich rendering of the learning environment rather than validating a singular, objective truth.

The final stages focused on conceptual precision and synthesis. In *Phase 5* (defining and naming themes), each theme was refined to identify its conceptual essence and unique narrative. During this phase, a recursive dialogue was maintained between the empirical material and scholarship on embodied pedagogy, participatory learning, arts-informed education, and community dance, ensuring that classroom experiences and theoretical perspectives meaningfully informed one another. Finally, *Phase 6 (producing the report)* involved weaving the analysis into a cohesive narrative, selecting vivid, illustrative data examples to demonstrate the depth of the situated professional knowledge generated across the ten-year period.

Throughout the analytic process, interpretations were critically interrogated against existing literature to avoid purely anecdotal conclusions and to situate practice-based insights within broader educational scholarship. Overall, codes came directly from student reflections, but also interpreted through specific theories (Kolb, Vygotsky, Merleau-Ponty). Braun and Clarke's (2021) framework explicitly emphasises that coding is almost always a dance between inductive and deductive process.

3.3 Ethical Considerations

The dual role of educator and researcher inevitably shapes both the pedagogical process and its interpretive analysis. Consistent with practitioner inquiry and the reflexive paradigm of RTA, this positionality is embraced as a vital source of situated insight that requires continuous, critical reflexivity (Loughran, 2002). Trustworthiness was explicitly cultivated through a ten-year prolonged engagement within the specific educational context and a rigorous, recursive engagement with the data. To ensure the analysis transcended purely anecdotal observations, interpretations were systematically contextualized and interrogated against established educational scholarship.

Administratively, all described pedagogical activities formed part of regular university coursework. Students were fully informed that their reflective materials could contribute to broader scholarly reflection. To ensure equity and safety, participation in movement activities and performances strictly respected individual comfort and accessibility needs. Students maintained the right to decline physical attendance or withdraw consent without academic penalty, and alternative forms of analytical or observational engagement were always made available. Finally, in presenting the illustrative examples throughout this paper, strict anonymity has been maintained, and all identifying personal information has been removed.

4 Results/Discussion

This section presents findings generated through Reflexive Thematic Analysis (RTA), developed from sustained teaching practice in embodied pedagogical contexts. The analysis is organised in relation to the three research questions guiding the study:

- RQ1: What recurring patterns of learning and participation emerge from students' experiences of embodied pedagogies in undergraduate teacher education?
- RQ2: How do students describe their learning experiences through embodied pedagogical practices?
- RQ3: How do these recurring insights inform understandings of embodied knowledge, participation, and inclusive pedagogy?

Findings are presented through interpretive patterns supported by pedagogical vignettes and indicative student reflections. In line with RTA, these are not treated as fixed results but as constructed meanings emerging through iterative analysis and reflexive interpretation.

4.1 Embodied Entry, Participation, and Conditions of Learning (RQ1)

The first interpretive pattern concerns how embodied pedagogical entry points reshape initial conditions of participation. Beginning learning through movement rather than verbal instruction consistently alters how students enter the classroom space, reducing hesitation and expanding modes of engagement. By bypassing the immediate demand for articulate text-based or verbal responses, embodiment functions as an equalizing pedagogical condition. It expands the range of ways in which students can contribute meaningfully, allowing those who may initially be less verbally assertive or academically confident to find alternative entry points into the curriculum.

From an embodied cognition perspective, meaning emerges through sensorimotor engagement rather than prior abstraction (Merleau-Ponty, 1962; Lakoff & Johnson, 1999). In this sense, embodiment functions as an access structure rather than an expressive add-on (Florian & Black-Hawkins, 2011).

Vignette 1: The Affective Gesture

Students are invited to express their internal state through a single movement gesture without verbal explanation. This dynamic is consistently visible in an introductory movement exercise when meeting a new group. Without prior verbal explanation or justification, participants use physical qualities such as speed, tension, weight, and flow to communicate. As these gestures are shared simultaneously within the group, a collective landscape of affective and cognitive states becomes visible, allowing those who may initially be less verbally assertive to find alternative entry points into the curriculum (Jusslin et al., 2024).

This moment consistently generates a heightened awareness of relational presence, as students recognize both difference and resonance within the room and facilitates group cohesion. Ultimately, the activity serves as an uninhibited entry point into understanding the body as a legitimate communicative and interpretive medium. By applying similar activities in education, it enables children to develop a deeper understanding of themselves. By understanding the dynamics and qualities of a movement, students can relate to specific personal movement patterns of their own. Understanding more deeply the body, assists students to understand what is happening to them, when it happens and how the body responds to similar situations. Therefore, this leads to finding ways to manipulate certain states and to have a deeper understanding of the self.

“At first, I did not want to participate so I was watching, but then I stopped thinking and started moving with others.” (Portfolio-1st year student).

This moment illustrates a shift from observational positioning to embodied participation. Agency is redistributed across bodily, relational, and affective registers. Rather than requiring verbal confidence, participation becomes multimodal and situationally accessible (Jusslin et

al., 2024). This directly addresses RQ1 by showing how participation patterns emerge through embodied entry conditions.

4.2 Relational Meaning-Making and Collaborative Knowledge Construction (RQ1 + RQ2)

A second pattern concerns the emergence of collaborative epistemic practices. Movement-based pedagogies consistently redistribute authority, shifting classroom dynamics from transmission to co-construction. This aligns with socio-constructivist and dialogic frameworks (Vygotsky, 1978; Freire, 1970). Over time, students demonstrated increasing confidence in listening to one another, negotiating different perspectives, making collective decisions, and assuming shared responsibility for the learning process. These observations suggest that embodied pedagogies can foster collaborative competence by creating educational environments in which knowledge emerges through participation, dialogue, and shared embodied experience rather than through individual acquisition alone. This process strengthens students' capacities for collective attentiveness, deep listening, and physical responsiveness within group dynamics. This represents a critical pedagogical shift: moving away from performance-oriented, competitive learning toward a model of co-constructed inquiry where multiple interpretations are not only accepted but structurally necessary. Within this context, knowledge is not delivered but negotiated through shared embodied action.

Vignette 2: Embodying Narrative

Students reconstruct mythological narratives physically through collective movement composition, negotiating roles, tensions, and symbolic structures.

To do this, they had to negotiate roles, physical tensions, and symbolic structures entirely through their bodies. Through their bodies, they explored concepts found in the myth, through dynamics of movements. They identified symbolisms and metaphors, discussed about stereotypical assumptions that have passed to us throughout time and used transformative learning to give their own meanings to the myth. The process revealed how narrative meaning can be actively constructed and deconstructed through physical interaction, frequently bringing forward deep, implicit interpretations of power dynamics that typically remain unarticulated or suppressed in standard verbal discourse.

“There wasn’t one correct answer or interpretation; our different bodies created different meanings.” (Portfolio-4th year student).

“It gave the opportunity to collaborate, to actively listen to each other, to accept each individuality and to co-create a transformative myth that applies to modern society” (Portfolio-4th year student).

Field notes from the session highlight that embodied collaboration produces distributed authorship, where meaning emerges through interaction rather than individual articulation. This reflects RQ2 by showing how students describe learning as relational, emergent, and materially enacted. It also addresses RQ1 through the recurring pattern of collective negotiation as a mode of participation.

4.3 Inclusion as Situated Embodied Practice (RQ2 + RQ3)

A third pattern concerns inclusion as enacted participation rather than structural accommodation. Embodied pedagogies create differentiated entry points into meaning-making, particularly for students less aligned with dominant verbal or symbolic academic practices.

Inclusion here is understood as emergent through participation, responsiveness, and relational attunement (Ainscow, 2020; Shapiro, 2019).

Vignette 3: Inclusion Through Co-Creation

In a participatory performance with a professional company including dancers with and without disabilities, students co-created movement material without expectations of uniformity. More than one hundred undergraduate students co-created and performed alongside the professional artists. Throughout the rehearsal process, there was no expectation that everyone should move in the same way or perform identical choreography. Instead, each participant contributed their own movement material, which was collectively negotiated and incorporated into the final composition.

During the performance, communication relied almost entirely on embodied interaction. Students navigated the unfolding choreography by maintaining eye contact, responding to one another's movements, and remaining attentive to the collective flow rather than following verbal instructions. The success of the performance depended on mutual trust, shared responsibility, and responsiveness rather than technical uniformity. Reflective memos written after the performance highlighted that communication, of 100 participants, relied on embodied responsiveness and shared spatial awareness in a magical way.

“Working collectively made me realise that this is inclusion in practice.” (Portfolio-3rd year student).

Students' reflective portfolios revealed that this experience fundamentally shaped their understanding of inclusion. They described inclusion as working towards a common purpose while valuing each person's unique contribution; accepting different movement ideas without judgment; dancing together without the expectation of sameness; and developing a sense of connection through mutual attention and embodied presence. Rather than learning about inclusion as an abstract educational concept, they experienced it as a lived, relational practice enacted through collective artistic creation (Amans, 2008; Florian & Black-Hawkins, 2011)).

Inclusion is not enacted through adaptation but through co-presence and negotiated difference. Observational notes taken immediately after the session suggest that diversity becomes constitutive of meaning-making rather than a variable to be accommodated. This addresses RQ3 by reframing inclusive pedagogy as a relational and embodied epistemology rather than a procedural strategy.

4.4 Embodied Knowledge as Transdisciplinary Reconfiguration (RQ2 + RQ3)

A final pattern concerns knowledge as embodied and transdisciplinary. From phenomenological and embodied cognition perspectives, cognition emerges through lived engagement rather than abstract representation alone (Merleau-Ponty, 1962; Lakoff & Johnson, 1999). Movement becomes an epistemic medium through which abstract concepts are materially experienced.

When applied to educational contexts, this perspective positions movement as a transdisciplinary epistemic medium. Across curricular domains, mathematics, physics, language, history and more, can be approached not only as systems of representation but as forms of embodied experience. Spatial relationships, physical forces, temporal sequences, and social dynamics become accessible through kinesthetic exploration, collective movement, and situated interaction. This does not replace conceptual or symbolic thinking but reconfigures it through bodily grounding, allowing learners to connect abstraction with lived experience (personal notes).

Such an approach also aligns with critiques of overly decontextualized and language-dominant pedagogies, which may privilege certain forms of expression while marginalizing others (Freire, 1970). Embodied pedagogies instead, expand the conditions of participation in knowledge construction by enabling multiple modes of access, expression, and understanding (Shapiro, 2019). It is within this conceptual framework that the following vignette is situated.

Vignette 4: Geometry Score

Students explore mathematical concepts through choreographic tasks involving rotation, symmetry, and spatial translation. For example, in one task, participants worked in small groups to embody transformations such as rotation and symmetry: one student initiated a movement phrase, which was then rotated spatially by others around a shared center; in another variation, groups translated a movement sequence across space, using levels, directions and pathways, while maintaining relational distances and alignment rules defined collectively. One student reflected:

“I realised I understood symmetry for the first time when I experienced it through movement rather than drawing it.” (Student portfolio, Year 4).

Rather than approaching mathematics as a distant, abstract system of symbols, learners engaged with it as a direct spatial and relational experience. Mathematical operations were not explained in advance but discovered through bodily trial, negotiation, and observation within the group. For students who historically experienced barriers or anxiety when engaging with conventional symbolic representations of mathematics, *“This physical recontextualization enabled alternative, intuitive entry points into conceptual understanding, grounded in perception, movement, and shared spatial awareness.”* (personal memo-field notes).

Across multiple sessions, field notes revealed a recurring pattern which shows that abstract knowledge is reconfigured as situated experience. Conceptual understanding emerges through bodily experimentation and collective spatial reasoning. This addresses RQ3 by demonstrating how embodied pedagogy expands epistemic access across disciplinary domains.

Safeguarding, Consent, and Accessibility

All embodied activities were designed within an ethical pedagogical framework grounded in informed consent, voluntary participation, and the right to modify or withdraw from movement tasks at any point without academic penalty.

Students were explicitly informed that participation could take multiple forms (full participation, adapted movement, observation), ensuring accessibility across diverse physical, emotional, and cultural conditions.

Tasks were designed with progressive intensity, clear spatial organisation, and continuous facilitator awareness to minimise physical or psychological risk. Reflective materials used for analysis were anonymised and derived from coursework submitted with explicit consent for research use in accordance with institutional ethical procedures.

5 Conclusion

This study explored how embodied pedagogical practices are experienced and interpreted within undergraduate teacher education through a Reflexive Thematic Analysis. Rather than seeking objective or generalisable findings, the analysis developed a series of interpretive

themes that illuminate how students and educator jointly construct embodied experiences of participation, knowledge, and inclusion.

Beyond demonstrating the pedagogical value of movement-based learning, this paper contributes to ongoing discussions in embodied pedagogy by framing movement as an epistemological resource. Rather than treating embodiment as an instructional technique, the study argues that embodied participation reshapes how knowledge is generated, negotiated, and experienced within higher education. The integration of practice-based vignettes, student reflections, and reflexive analysis illustrates how embodied pedagogies can expand participation, redistribute epistemic authority, and foster more inclusive forms of educational engagement.

Taken together, the themes offer a coherent interpretation of embodied pedagogy as an epistemological orientation rather than simply a pedagogical technique. Across the analysis, learning is understood as emerging through movement, relational engagement, dialogue, and shared inquiry. In this interpretation, the body functions not merely as a medium through which knowledge is expressed, but as a site through which knowledge is constituted and negotiated.

These findings have practical implications for teacher education and curriculum design. The contribution of this paper lies in offering a practice-based interpretation of how embodied pedagogical practices can expand participation, redistribute epistemic authority, and create more inclusive conditions for learning. By integrating pedagogical vignettes, student reflections, field observations, and reflexive memoing, the study illustrates how embodied experiences become analytically meaningful within an RTA framework.

The analysis suggests that embodied pedagogical practices may offer meaningful pathways for engaging learners with abstract concepts across diverse disciplinary contexts. Rather than replacing conceptual or verbal forms of learning, movement can extend the ways in which learners access, construct, and communicate knowledge.

Because the analysis is grounded in one educator's long-term teaching practice, the themes should be understood as contextually situated interpretations rather than universally applicable categories. Future research may explore how similar embodied pedagogical approaches are interpreted across different educational contexts, disciplinary traditions, and cultural settings.

Ultimately, this study argues that embodied pedagogy invites a reconceptualisation of higher education, not by adding movement to existing pedagogies, but by rethinking learning itself as an embodied, relational, and continuously emerging process of meaning-making.

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