

THRESHOLD PEDAGOGY: SENSES AND LIMINAL SPACES FOR TRANSFORMATIVE LEARNING

PEDAGOGIA DELLE SOGLIE: SENSI E SPAZI LIMINALI PER UN APPRENDIMENTO TRASFORMATIVO

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Double Blind Peer Review

Latino, F., Romano, G., Tafuri, G. (2025). Threshold pedagogy: senses and liminal spaces for transformative learning. Italian Journal of Health Education, Sports and Inclusive Didactics, 9(3).

Doi: <https://doi.org/10.32043/gsd.v9i3.1572>

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gsdjournal.it

ISSN: 2532-3296

ISBN: 978-88-6022-522-1

ABSTRACT

The article outlines a pedagogy of thresholds that frames liminality as an embodied and spatial condition central to transformative learning. By engaging senses, spaces, and slowed temporalities, education fosters generative uncertainty, reflexivity, and care. Principles of design, implications for teacher education, assessment, and policy are discussed, with attention to justice and inclusion, to create environments where transition becomes livable and transformation sustainable.

Il saggio propone una pedagogia delle soglie che assume la liminalità come esperienza corporea e spaziale decisiva per l'apprendimento trasformativo. Attraverso sensi, spazi e tempi lenti, la didattica coltiva incertezza generativa, riflessività e cura. Si delineano principi di design, implicazioni per formazione docente, valutazione e policy, con attenzione a giustizia e inclusione, per ambienti che rendano abitabile il passaggio e consolidino cambiamento.

KEYWORDS

Liminality, Transformative Learning, Pedagogy.

Liminalità, Apprendimento Trasformativo, Pedagogia.

Received 09/09/2025

Accepted 28/10/2025

Published 07/11/2025

Introduction

The notion of liminality has long attracted the attention of anthropologists, philosophers, and educational theorists as a way of interpreting transitional states, border zones, and the unfolding of transformation within human experience (Martino et al., 2024). First developed in the anthropological writings of van Gennep (1909/1960) and later elaborated by Turner (1969), liminality describes the intermediate stage in rites of passage, where the individual moves away from one social role or condition but has not yet assumed another. This threshold space, at once unstable and generative, is charged with ambiguity and potentiality. In contemporary educational research, liminality has emerged as a powerful metaphor and analytic category through which to interrogate processes of learning, identity formation, and the embodied experience of transition. The very etymology of the term, deriving from the Latin *limen*, meaning threshold, suggests a place of passage where established structures are suspended and where transformation becomes possible.

In pedagogical contexts, liminality is not only a conceptual lens but also an experiential reality (Berni, 2024). Students regularly encounter situations that displace them from familiar certainties and expose them to new intellectual, relational, and affective landscapes. Learning often entails entering a space where previous assumptions lose their stability and where new forms of understanding remain unformed, creating a zone of discomfort, openness, and indeterminacy. Meyer and Land (2005) have described this as the encounter with “threshold concepts,” disciplinary ideas that are transformative, integrative, and often troublesome, forcing learners into a liminal state in which their prior frameworks must be reconfigured. Yet, beyond the cognitive dimension, liminality also has profound bodily and spatial resonances. To inhabit a threshold is to experience disorientation and vulnerability, but also the possibility of reimagining one’s relation to the world through the senses and through spatial practices.

Recent developments in embodied pedagogy and spatial theory underscore the need to consider liminality not simply as an abstract metaphor but as a lived, sensory, and spatial condition. Theories of embodied cognition emphasize that learning is grounded in bodily movement, affective resonance, and sensory engagement (Shapiro, 2019). Similarly, approaches inspired by phenomenology and cultural geography have examined how educational spaces, classrooms, corridors, outdoor environments, structure and destabilize experiences of belonging, marginality, and transition (Casey, 1996; Massey, 2005). The

convergence of these perspectives suggests that liminality in education is not confined to epistemological thresholds but also manifests in corporeal and spatial dimensions, demanding a pedagogy attentive to the senses and to the material and symbolic qualities of space.

The anthropological roots of liminality provide a rich foundation for this inquiry. Van Gennep (1909/1960) identified three phases in rites of passage: separation, liminality, and incorporation. The liminal phase suspends the subject between past and future identities, destabilizing social categories and enabling transformation. Turner (1969) extended this analysis, describing liminality as a realm of *communitas*, creativity, and anti-structure, where conventional hierarchies are temporarily dissolved. These insights have inspired educational theorists to reconceptualize learning as a form of passage, in which students are separated from prior certainties, inhabit a threshold of ambiguity, and eventually integrate new perspectives. However, unlike ritualized contexts, learning does not always culminate in stable incorporation; rather, it often sustains a dynamic oscillation between liminal disruption and emergent reconfiguration.

Within higher education, Meyer and Land's (2005) theory of threshold concepts has highlighted the epistemological dimension of liminality, suggesting that certain ideas function as portals to new disciplinary landscapes. Yet the emphasis on cognitive mastery can obscure the affective, corporeal, and spatial turbulence that accompanies such thresholds. Students frequently describe feelings of anxiety, alienation, or even loss of identity when confronted with transformative concepts (Cousin, 2006). These affective and embodied dimensions are not merely incidental but integral to the liminal process. Indeed, they indicate that learning thresholds are not only intellectual but also existential and relational, reshaping how students inhabit themselves and their environments.

Pedagogical approaches that recognize this broader horizon of liminality emphasize the cultivation of spaces that can hold ambiguity and foster sensory attunement. Embodied learning practices, such as movement-based activities, arts integration, or mindfulness, invite students to engage their bodies as instruments of knowing, thus expanding the liminal zone beyond cognitive struggle into a field of sensory exploration (Ellsworth, 2005). Spatially, liminal environments may include not only physical thresholds, such as doorways, hallways, or outdoor learning spaces, but also digital and hybrid environments where learners negotiate overlapping realities (Bayne, 2015). These spaces suspend normative routines and

offer occasions for reimagining pedagogical relations, often creating new forms of *communitas* among learners.

At a broader level, the pedagogy of thresholds resonates with contemporary debates on uncertainty, precarity, and transformation in education. In an era marked by rapid technological change, ecological crisis, and social fragmentation, learners are increasingly required to navigate transitions that are unsettled and ongoing (Antonucci et al., 2024). Education cannot provide stable certainties alone; it must also equip learners to dwell within liminal conditions, developing resilience, creativity, and openness. As Biesta (2013) argues, education should not be reduced to the delivery of predetermined outcomes but should create encounters with what is other, disruptive, and transformative. In this sense, a pedagogy of thresholds foregrounds liminality as a generative condition rather than a deficit to be overcome.

Furthermore, acknowledging the bodily and spatial dimensions of liminality challenges the hegemony of abstract, disembodied models of learning. It calls for a reorientation of pedagogy toward the lived experience of learners in their fullness, integrating mind, body, and environment. This perspective also intersects with inclusive and critical pedagogies, as liminal spaces often expose relations of power, privilege, and marginality. For students from minoritized backgrounds, the experience of being in-between, between cultures, languages, or identities, may resonate deeply with the notion of liminality, demanding pedagogical practices that affirm rather than erase such thresholds (hooks, 1994).

The notion of liminality, with its anthropological, philosophical, and pedagogical resonances, thus emerges as an experience of transition in which certainties are suspended and the space of learning opens to transformation. To consider the threshold as a site of instability means acknowledging that education does not advance solely through the acquisition of abstract concepts but is rooted in the bodily and spatial experiences that students inhabit on a daily basis. Dwelling within the threshold entails embracing vulnerability and disorientation, yet also opening oneself to the possibility of reorganizing the relationship with knowledge and with the world. Within this perspective, liminal experiences cannot be regarded as marginal or accidental moments but must be understood as central conditions for genuinely transformative learning. They engage the whole person, intertwining cognitive, sensory, and relational dimensions, and they reveal the potential of educational spaces as passages in which new forms of awareness can emerge.

This article seeks to articulate a theoretical framework that places liminality at the core of educational transformation, showing how attention to bodily and spatial dimensions allows educators to design practices that foster openness to uncertainty, cultivate sensory awareness, and activate liminal spaces as genuine sites of possibility.

1. Liminality as an Embodied and Spatial Condition

To grasp the pedagogical significance of liminality, it is necessary to move beyond its interpretation as a purely cognitive or symbolic phenomenon and instead situate it within the embodied and spatial dimensions of human experience. While the anthropological foundations of the concept emphasize ritual and social transformation (Turner, 1969; van Gennep, 1960), more recent theoretical developments in education, philosophy, and cultural geography have revealed that thresholds are not only cultural or intellectual constructs but also lived experiences enacted through the body and shaped by the environments in which individuals learn. In this perspective, liminality must be rethought as a condition that integrates sensory perception, corporeal presence, and spatial orientation, challenging pedagogical models that privilege abstraction over lived experience.

The body is the primary medium through which learners encounter the world. As phenomenology has long argued, perception is not the passive reception of stimuli but an active engagement in which the body anchors subjectivity and orients meaning (Merleau-Ponty, 1962). When students are displaced into liminal states, they experience not only conceptual disorientation but also visceral and affective disruptions: their breathing changes, their gestures express uncertainty, their posture signals hesitation. These embodied responses reveal that learning thresholds are not detached from the physical self but inscribed in muscular tensions, sensory intensities, and rhythms of movement. As Shapiro (2019) notes, the theory of embodied cognition underscores the extent to which cognition is scaffolded by bodily states and sensory modalities. From this standpoint, liminality cannot be fully appreciated without attending to its corporeal resonances.

Spatiality is equally central to the understanding of liminality. Spaces are never neutral backdrops for educational processes; rather, they actively configure possibilities of action, relation, and transformation (Massey, 2005). Corridors, thresholds, open spaces, and transitional zones within educational institutions often embody liminal qualities. They are neither private nor public, neither wholly structured nor completely free, yet they provide occasions for informal learning,

negotiation of identities, and experimentation with roles. Casey (1996) has shown that the shift from space to place is marked by embodied inhabitation, meaning that thresholds become pedagogically significant when learners feel them as places of passage. The liminal character of these spaces resides in their ambiguity, in their resistance to clear categorization, and in their capacity to disrupt established routines.

One striking example can be found in the use of outdoor learning environments. When students move beyond the classroom walls into gardens, urban landscapes, or natural sites, they enter spaces that destabilize the familiar grammar of learning. Research on place-based education has demonstrated that outdoor environments foster a heightened sensory engagement, from the texture of soil under the hands to the resonance of soundscapes that differ from indoor acoustics (Gruenewald, 2003). Such experiences are profoundly liminal: they estrange learners from habitual spatial orders, demanding openness to an environment that resists complete control. In doing so, they invite forms of transformation that are both cognitive and embodied, expanding the field of education to include the multisensory encounters with place.

Digital environments provide another layer to the discussion of spatial liminality. In blended or online learning, students often experience a sense of dislocation, navigating between virtual and physical spaces, between presence and absence, between embodiment and abstraction. Bayne (2015) has argued that technology-enhanced learning is itself a liminal condition, suspending learners in in-between spaces that trouble the boundaries between materiality and virtuality. These environments require learners to negotiate fragmented identities and shifting modes of presence, often generating both anxiety and creative possibility. From this perspective, digital learning is not simply a tool but a liminal space that reshapes the embodied and spatial conditions of pedagogy.

The recognition of liminality as embodied and spatial has important implications for how we conceptualize transformative learning. Transformative learning theories, particularly those developed by Mezirow (1991), emphasize critical reflection and the restructuring of meaning perspectives. While these accounts highlight the destabilizing effects of disorienting dilemmas, they often understate the bodily and spatial dimensions through which such dilemmas are lived. A more comprehensive account would suggest that transformation occurs not only in reflective consciousness but also in the body that trembles in uncertainty, in the senses that are reoriented by unfamiliar environments, and in

the spatial arrangements that unsettle habitual roles. As Ellsworth (2005) notes, learning spaces are themselves pedagogical, shaping not only what can be known but also how it can be felt and embodied.

Moreover, the liminal experience is deeply affective. Students crossing thresholds often describe anxiety, confusion, or a sense of loss, but also curiosity, exhilaration, and openness (Cousin, 2006). These emotions are not side effects but constitutive of the transformative process. To learn liminally is to dwell within affective intensities that resist resolution, to hold the tension between fear and excitement, between loss and discovery. Biesta (2013) emphasizes that education should not protect learners from such encounters but rather cultivate a capacity to remain in touch with the “beautiful risk” of education, where unpredictability and vulnerability are acknowledged as generative forces. Pedagogy, in this sense, becomes an art of sustaining the affective and sensory density of liminal spaces without rushing to closure.

Attention to embodiment and space also reveals the political dimensions of liminality. Educational thresholds are not equally accessible or experienced; they intersect with social differences, privileges, and exclusions. For students from marginalized backgrounds, the experience of liminality may be heightened by the sense of inhabiting multiple cultural thresholds simultaneously, negotiating hybrid identities that resist stable categorization (hooks, 1994). Liminality here is not a temporary phase but a structural condition of existence. This insight complicates the pedagogical romanticization of thresholds as merely creative spaces, highlighting the need to attend to power relations that shape who can inhabit liminality safely and who encounters it as a site of vulnerability or exclusion. Inclusive pedagogies, therefore, must cultivate thresholds not only as places of possibility but also as environments of care and recognition.

Practical applications of a pedagogy of embodied and spatial liminality are already visible in several innovative educational practices. Movement-based learning, for instance, introduces physical improvisation, dance, or theater into classrooms to enable students to explore concepts through bodily enactment (Gallagher, 2006). These practices demonstrate how liminal states can be cultivated intentionally, placing learners in conditions where bodily awareness and relational presence open pathways to transformation. Similarly, architectural design of schools increasingly considers transitional spaces, staircases, hallways, and common areas, not as residual spaces but as potential pedagogical environments where encounters and thresholds are staged (Ellsworth, 2005). These approaches

signal a shift toward an educational ethos that acknowledges the threshold not as a peripheral disturbance but as the core of transformative pedagogy.

In sum, the embodied and spatial understanding of liminality expands the horizon of pedagogical imagination. It situates transformation not solely in the realm of cognitive restructuring but in the complex interplay of body, space, affect, and relation. It suggests that to learn is to traverse thresholds that are sensed, inhabited, and embodied, and that education, at its most transformative, requires attentiveness to these dimensions. The challenge for pedagogy is to design practices and environments that hold the uncertainty of thresholds while enabling learners to cultivate resilience, sensory awareness, and openness to the emergent. By doing so, educators not only honor the fullness of human experience but also affirm the threshold as a privileged site of learning and becoming.

2. Liminal Pedagogies and the Design of Transformative Educational Practices

If liminality is to be taken seriously as both an embodied and spatial condition of learning, then pedagogy must be reconceived not simply as the transmission of knowledge but as the cultivation of thresholds where transformation becomes possible. This reorientation requires educators to design practices, environments, and relations that allow students to inhabit uncertainty, engage their senses, and negotiate transitional spaces without prematurely resolving their tensions. A pedagogy of liminality is, in this sense, an invitation to create educational conditions that honor ambiguity, foster reflexivity, and support the emergence of new forms of subjectivity.

Theories of transformative learning have already paved the way for such considerations, particularly in the work of Mezirow (1991), who emphasized the role of disorienting dilemmas in prompting critical reflection and the reconfiguration of meaning perspectives. However, as many scholars have observed, transformation cannot be reduced to a rational process of reflection alone. It is equally shaped by the embodied and affective registers through which learners experience disorientation (Dirkx, 2006). Liminal pedagogies thus extend the scope of transformative learning by insisting that bodily sensations, emotions, and spatial contexts are not peripheral but constitutive of the process. For example, when students engage in artistic practices such as dance or visual storytelling, the threshold is not only cognitive but is felt in the body and inscribed in shared spaces of expression (Gallagher, 2006). These practices create conditions where the

learner's identity, perception, and relation to others can be reconfigured through liminal passage.

An essential feature of liminal pedagogy is the deliberate creation of spaces that suspend normative structures and invite alternative ways of knowing. Turner's (1969) description of liminality as a condition of anti-structure and *communitas* resonates strongly in educational contexts where hierarchies between teacher and learner are softened to allow collaborative inquiry. In dialogical classrooms inspired by Freire (1970), for instance, authority is decentered and knowledge is constructed collectively, generating liminal conditions where roles are destabilized and learners encounter the possibility of new relational modes. Similarly, hooks (1994) describes the classroom as a radical space of possibility, one that thrives precisely because it is marked by openness, vulnerability, and the suspension of certainty. These educational practices embody the threshold quality of liminality, where conventional routines are interrupted and transformation can take place.

Spatial design plays a pivotal role in cultivating such conditions. The arrangement of classrooms, the permeability of their boundaries, and the accessibility of transitional zones all shape the ways in which learners inhabit liminal experiences. Ellsworth (2005) has argued that architecture and media can produce "places of learning" that challenge linear models of knowledge transmission and instead support embodied exploration and collective negotiation. For example, open-plan learning environments, flexible furniture arrangements, and multi-sensory installations can transform classrooms into liminal sites where learners are encouraged to move, collaborate, and reconfigure their relations to space. Such environments resist closure and foster the openness necessary for transformative pedagogy.

Moreover, digital technologies have introduced new modalities of liminal pedagogy. Online and hybrid learning spaces displace learners from the conventional coordinates of presence, compelling them to negotiate multiple realities simultaneously. As Bayne (2015) observes, technology-enhanced learning is itself a liminal condition, producing hybrid spaces where embodiment and disembodiment, proximity and distance, are constantly entangled. Educators who design pedagogical practices for such environments must embrace this instability rather than attempt to resolve it. By incorporating multimodal expression, collaborative digital platforms, and opportunities for reflexive engagement, teachers can turn the liminal qualities of digital spaces into resources for transformation.

The affective dimension of liminal pedagogy cannot be overlooked. As Cousin (2006) suggests, learners often describe threshold encounters in terms of strong emotions, ranging from anxiety and confusion to exhilaration and joy. To design for liminality is therefore to design for affective intensity, creating conditions where learners are supported in navigating vulnerability without diminishing the generative potential of discomfort. Mindfulness practices, reflective journaling, and peer support structures can provide containers for such affective turbulence, enabling learners to remain within the liminal space long enough for transformation to occur. As Biesta (2013) notes, education involves a “beautiful risk,” and pedagogy must cultivate the courage to remain in contact with what is unpredictable and disruptive.

Importantly, liminal pedagogies also intersect with questions of justice and inclusion. Not all learners enter thresholds on equal terms, and for some, liminality is not a temporary condition but a structural reality shaped by marginalization and hybridity. For instance, students navigating cultural or linguistic borders may experience perpetual liminality, negotiating hybrid identities that defy stable categorization (Anzaldúa, 1987). A pedagogy attentive to these conditions must affirm rather than suppress such in-between identities, recognizing them as sites of creativity and resilience. hooks (1994) insists that inclusive pedagogy requires creating spaces where difference is acknowledged and valued, rather than assimilated into normative frameworks. Thus, liminal pedagogy becomes not only a strategy for transformation but also a political commitment to equity and recognition.

Concrete examples of liminal pedagogy can be observed in arts-based education, experiential learning, and interdisciplinary practices. Arts-based education employs performance, visual arts, and creative writing to create liminal conditions where learners step outside habitual modes of expression and enter zones of uncertainty. Such practices foreground the sensory and affective dimensions of learning, enabling students to reconfigure their subjectivities through embodied exploration (Gallagher, 2006). Experiential learning, similarly, often thrusts students into unfamiliar contexts—whether community engagement, internships, or study abroad programs—that destabilize their assumptions and force them to inhabit liminal thresholds of cultural and personal transformation (Kolb, 1984). Interdisciplinary education, by crossing disciplinary boundaries, generates liminal zones where familiar epistemologies no longer suffice and new integrative frameworks must be forged.

Another important dimension of liminal pedagogy lies in temporality. Educational time is often structured linearly, oriented toward progression, completion, and assessment. Yet liminal experiences disrupt this linearity, creating pauses, suspensions, and delays where transformation unfolds unpredictably. As Land et al. (2008) note in their extension of threshold concepts theory, learners may linger in liminal states for extended periods, oscillating between old and new understandings. A pedagogy attuned to liminality must therefore resist the pressure to accelerate resolution and instead value the pedagogical potential of waiting, hesitation, and repetition. Such an approach resonates with calls to “slow pedagogy,” which emphasizes reflective dwelling and the cultivation of depth over speed (Berg & Seeber, 2016).

The cultivation of liminal pedagogy also requires a rethinking of assessment practices. Traditional assessment often privileges closure, demanding fixed outcomes and stable demonstrations of mastery. Yet if liminality is constitutive of transformative learning, then assessment must account for processes of becoming rather than only measurable products. Narrative assessment, portfolios, and reflective writing can provide spaces where learners articulate their journeys through thresholds, acknowledging ambiguity and transformation as integral to learning. These approaches resist the temptation to eliminate uncertainty and instead value it as evidence of growth.

Ultimately, liminal pedagogy redefines education as a practice of designing for thresholds. It challenges educators to craft environments, practices, and relations that make space for ambiguity, disorientation, and sensory engagement. It foregrounds the body and space as central to learning, while also attending to affective intensities and questions of justice. Most importantly, it affirms liminality not as an obstacle to be overcome but as a generative condition in which learners can reconfigure their relations to knowledge, self, and community. In doing so, liminal pedagogy opens education to its transformative potential, acknowledging that to learn is always to cross a threshold, to dwell in uncertainty, and to emerge changed.

3. Designing for Liminality: Sensing, Spacing, and Sustaining Transformative Learning

Taking liminality seriously as a core condition of learning requires a shift from delivering content to choreographing experiences in which thresholds can be approached, inhabited, and worked through. Such choreography is at once sensory,

spatial, temporal, affective, and ethical. It concerns how educators invite learners to dwell in zones where the old no longer suffices and the new has not yet taken shape, how spaces are configured to hold ambiguity without collapsing into confusion, and how time is slowed or stretched to allow meanings to sediment and identities to recompose. A pedagogy that designs for liminality therefore cultivates practices that intensify perception, heighten embodied awareness, and render space an active participant in the learning event, while also attending to the risks, inequities, and vulnerabilities that threshold encounters may entail (Biesta, 2013; Ellsworth, 2005).

The sensory register is the first site of design. Because liminal experience is felt before it is understood, pedagogical sequences that begin with perception can open learners to the threshold's generative disorientation. Sensory-rich provocations, such as soundwalks, tactile materials, or guided attention to micro-phenomena in the learning environment, create conditions in which taken-for-granted schemata loosen and alternative patterns become noticeable. In phenomenological terms, perception is not mere reception but a bodily way of taking up the world, so that learning becomes a re-education of the senses that reorients attention and intention (Merleau-Ponty, 1962). Embodied cognition research similarly shows that conceptual change is scaffolded by sensory-motor states, gesture, and posture, suggesting that threshold passages are supported when learners can move, touch, breathe, and align their bodies with emergent meanings rather than remaining seated within rigid layouts that fix attention and constrain possibility (Shapiro, 2019).

Space, in this view, is not a neutral container but a dynamic medium that constitutes pathways of relation and action. Corridors, alcoves, thresholds, and edges function as pedagogical resources precisely because they blur categories, mixing public and private, formal and informal, individual and communal. When classrooms are reconfigured as landscapes of affordances rather than rows of desks, they can host liminal events in which learners circulate among zones for quiet reflection, collaborative inquiry, and sensory exploration (Ellsworth, 2005). The point is not to romanticize openness but to curate gradients of enclosure and exposure so that vulnerability is held and agency is supported. Cultural geography has long emphasized that place is co-constituted by movement and encounter, which means that learning spaces can be designed to foster crossings, lingerings, and negotiated proximities that make thresholds livable and fruitful (Massey, 2005; Casey, 1996).

Digital environments deepen the spatial problematic by dissolving clear boundaries between here and elsewhere, now and later, body and interface. Rather than treating technology as a delivery mechanism, liminal pedagogy acknowledges the hybrid atmospheres of networked learning, where presence is distributed and identity is in play. In such conditions, multimodal tasks that invite voice, image, gesture, and screen-based collaboration can turn the in-betweenness of online and blended settings into a resource, while explicit rituals of arrival and departure mark transitions across platforms and states of attention (Bayne, 2015). The threshold here is not merely conceptual but ontological, as learners navigate partial presences and negotiate accountability amid dispersal; design must therefore render participation tangible without foreclosing the productive ambiguity that sustains inquiry.

Temporality is equally pivotal. Thresholds seldom yield to speed. Learners often oscillate, looping between older frames and emergent understandings, lingering in what Land and colleagues have called liminal states of mimicry and stuckness before breakthroughs consolidate (Land et al., 2008). Designing for liminality entails legitimizing these rhythms by slowing the pace, staging pauses for reflective return, and resisting the compulsion to finalize too quickly. Practices of slow pedagogy, including contemplative pauses, iterative revisiting of artifacts, and time for unhurried dialogue, do not aim at inefficiency but at depth, allowing disorientation to do its work and integration to ripen (Berg & Seeber, 2016). Temporal generosity is thus an ethical stance, signaling that uncertainty is not failure but a condition of becoming.

Affective life pulses at the heart of threshold encounters. Learners name anxiety, confusion, exposure, and exhilaration when describing transformative passages, and these emotions often arrive intertwined, defying neat management (Cousin, 2006). Liminal pedagogy does not aim to eliminate discomfort but to companion it, providing containers that convert turbulence into energy for inquiry. Structured reflection, low-stakes narrative writing, peer witnessing protocols, and mindfulness practices can help learners name and regulate intensities without disavowing them. In adult learning, emotion is not an add-on but a driver of re-meaning-making; attending to dreams, images, and symbols can sometimes unlock impasses more effectively than purely rational analysis, opening alternative routes through the threshold (Dirkx, 2006; Mezirow, 1991). Across age groups, the relational climate is decisive: trust, attentiveness, and the teacher's willingness to

model uncertainty generate the safety needed to take the beautiful risk of education seriously (Biesta, 2013).

Power traverses all these registers. For some communities, liminality is not a temporary phase tucked within a stable trajectory but a structural condition of living between languages, cultures, or status regimes. Designing thresholds responsibly requires recognizing that what is exhilarating for some may be threatening for others, and that safe passage demands attention to recognition, resources, and voice. Critical and inclusive pedagogies warn against romanticizing in-betweenness without confronting exclusion and precarity; the task is to cultivate spaces where difference is not assimilated to a norm but engaged as a source of knowledge and creativity (hooks, 1994). Borderlands theory underscores this point, reading hybrid identities as engines of new grammars for living and learning, yet also naming the wounds of marginality; liminal pedagogy, then, must be both enabling and protective, imaginative and reparative (Anzaldúa, 1987).

From these principles follow concrete design moves. First, curate entry rituals that mark the crossing into a learning space, such as thresholds of silence, collective breathing, or a shared sensory prompt. These practices enact separation from habitual roles and signal the suspension of routine, echoing classic accounts of rites of passage while adapting them to educational aims (Turner, 1969; van Gennep, 1960). Second, layer modalities so that every concept is engaged through multiple channels: a brief reading, a diagram, a movement phrase, a material manipulation, and a dialogue round. Multimodality widens the aperture through which unfamiliar meanings can be apprehended and gives bodies something to do while minds work through perplexity. Third, design spatial itineraries within and beyond the classroom. A sequence might move from an open commons to a narrow passage to an exterior location before returning to a circle, each shift amplifying a particular affordance of place for attention, intimacy, or expansion (Ellsworth, 2005; Casey, 1996).

Fourth, scaffold reflection across time so that disorientation is revisited rather than dissolved. Learners can maintain threshold journals, mapping their oscillations, questions, and emergent metaphors, while occasional meta-conversations make the process of becoming newly visible and speakable. Fifth, adopt assessments that register becoming rather than only achievement. Portfolios, narrative self-assessments, and reflective annotations on drafts can trace the arc across the liminal field, valuing uncertainty as evidence of serious work rather than as a sign of deficit. In programs that must grade, rubrics can include

criteria for risk taking, openness to revision, and quality of attention, thereby aligning evaluation with the values of liminal design (Land et al., 2008; Mezirow, 1991).

Examples from arts-based and experiential learning illustrate these moves vividly. Performance ethnography, for instance, uses staging, improvisation, and audience encounter to relocate research and learning into a theatrical threshold where bodies and stories co-compose knowledge; the method makes vulnerability palpable yet shared, transforming the classroom into a site where new relations to truth and community are rehearsed (Gallagher, 2006). Place-based projects take learners into urban edges or natural sites, asking them to document textures, trace histories, and design micro-interventions that respond to local affordances; such work converts the city or landscape into a living threshold where the senses lead and theory follows, integrating action and reflection in situ (Gruenewald, 2003; Massey, 2005). In digital studios, meanwhile, students craft multimodal narratives that braid voice, image, and data, circulating drafts through peer networks and negotiating authorship and presence across platforms, thereby inhabiting the liminality of networked identity as a creative constraint rather than a liability (Bayne, 2015).

The teacher's stance is crucial throughout. To design for liminality is to practice a pedagogy of accompaniment rather than control, an artistry of conditions rather than scripts. Teachers model how to ask real questions, tolerate ambiguity, and turn missteps into inquiry. They distribute authority, inviting learners to co-design protocols and to name the thresholds that matter to them, and they attune to the micro-ethics of care that make risk possible: pacing, tone, invitation, permission, withdrawal, return. Because thresholds can overwhelm, teachers must also know when to tighten structure, when to slow down, and when to offer closure. The interplay between opening and holding, between provocation and protection, is the craft that sustains transformative learning without tipping into chaos or harm.

Finally, the horizon of liminal pedagogy is civic and ecological. Threshold practices cultivate dispositions necessary for a world in flux: the capacity to notice before judging, to wait with complexity, to collaborate across difference, to improvise within constraints, and to reimagine relations with places and more-than-human others. In this sense, designing for liminality is not an exotic option but a pragmatic response to the conditions of contemporary life and education. By making senses and spaces active partners in learning, and by honoring the temporalities and affects of transition, educators invite learners into an ethics of

attention and a politics of relation that can sustain democratic and sustainable futures. Education then becomes, in Turner's terms, an ongoing rite not of passage into a fixed order, but of passage into shared practices of becoming, where thresholds are not obstacles to be overcome but generative sites through which we continually learn to live and learn together (Turner, 1969; Biesta, 2013).

4. Teacher Education, Assessment, and Policy for Sustainable Transformation

If liminality is not an incidental disturbance but a central condition for transformative learning, its institutional implications must be faced with clarity and care. Designing isolated classroom activities is not enough (Berti et al., 2025). The cultivation of liminal experience requires teacher education that foregrounds embodied and spatial sensibilities, assessment regimes that value processes of becoming, and organizational policies that can hold uncertainty without collapsing into managerial control. In short, a liminal pedagogy calls for an ecology of practice that extends from the microdynamics of the seminar room to the meso scale of programs and curricula, and further to the macro frameworks of accreditation, accountability, and educational policy. Taking this systemic view is essential if the sensory and spatial dimensions of learning are to be sustained rather than neutralized by institutional inertia or pressures for standardization (Biesta, 2013; Ellsworth, 2005).

Teacher education is the first hinge. Many programs still privilege propositional knowledge and technique while underpreparing future educators to work with affect, embodiment, and the choreography of space and time. A liminal orientation would recompose teacher education around three clusters of formation. The first concerns somatic literacy, the capacity to read one's own bodily states and those of learners, to sense tension, hesitation, curiosity, and to modulate pace, posture, voice, and gesture accordingly. Research on embodied cognition shows that such micro adjustments scaffold conceptual change and facilitate movement across thresholds, linking gesture, attention, and meaning making in situated ways that abstract instruction cannot replicate fully (Shapiro, 2019; Merleau-Ponty, 1962). The second cluster concerns spatial design literacy, the ability to configure environments as atmospheres of learning, to work with thresholds, edges, and transitional zones, to curate gradients of exposure and shelter that render vulnerability livable and exploration safe. Cultural geography and phenomenology remind us that place is co produced by movement and encounter, therefore teachers need repertoires for turning corridors, courtyards,

and digital platforms into pedagogical resources rather than mere backdrops (Casey, 1996; Massey, 2005; Bayne, 2015). The third cluster concerns ethical and political discernment, the ability to recognize that liminality is differentially distributed and that invitations to risk are meaningful only where recognition, care, and access are secured. Critical and inclusive traditions insist that difference must not be assimilated into a thin universalism, and that teachers should design with, not simply for, those who inhabit borderlands as a structural condition of life and learning (hooks, 1994; Anzaldúa, 1987).

Mentored practice is vital to all three clusters. Clinical placements and studio based practicums can be reimagined as laboratories of liminal design in which novices experiment with entry rituals, multimodality, and spatial itineraries, while supervisors provide feedback on the ethics of pacing, consent, and closure. Reflection here is not only cognitive but narrative and sensory, as journals trace oscillations, stuck places, emergent metaphors, and slow consolidations. Rather than policing performance through checklists alone, mentors might ask how novices recognize and sustain uncertainty, how they accompany affective turbulence, and how they hold space for plural temporalities of learning, including waiting and repetition. Such an approach aligns teacher education with the insight that transformation proceeds unevenly, through looping itineraries rather than linear ladders of mastery, which threshold concepts theorists have documented across disciplines (Land et al., 2008; Mezirow, 1991).

Assessment is the second hinge, and it is often the place where liminal aspiration falters. Conventional assessment practices reward closure and stability, privileging the definitive over the emergent. If liminality is to be institutionally livable, evaluation must expand to register processes of becoming without abandoning rigor. Portfolios, narrative self evaluations, dialogic vivas, and reflective annotations can evidence the arc of learning across time, tracing how concepts were encountered, resisted, reworked, and finally integrated, sometimes provisionally and always relationally. Such genres do not preclude criteria. Rather, they require carefully articulated rubrics that make visible the qualities of liminal engagement, such as openness to revision, risk taking, quality of attention, responsiveness to others, and the ability to translate sensory and spatial insights into conceptual and ethical commitments. Importantly, this expansion of assessment connects to broader debates in adult learning about the interplay of reason and emotion in transformative change, where affect and imagination are not noise but signal (Dirkx, 2006; Biesta, 2013).

Program design and curriculum policy provide the third hinge. Courses can be sequenced to build capacities for liminal dwelling gradually, alternating between phases of provocation, exploration, and consolidation. Structural devices like intensives, field immersions, and interdisciplinary studios can be positioned as institutional thresholds, explicitly framed as departures from routine that invite reorientation. Within such sequences, digital and physical spaces can be braided, with online studios offering distributed collaboration and archival memory, while in person sessions deepen embodied attunement and place based literacy. The point is not to fetishize novelty but to normalize oscillation, making it pedagogically intelligible that learners may need to circle concepts repeatedly, inhabit uncertainty at different tempos, and test emerging understandings in varied atmospheres before integration holds. This curricular logic echoes classic accounts of rites of passage while adapting them to the open endedness of education, where incorporation is less a fixed arrival than a stabilized platform for the next crossing (Turner, 1969; van Gennep, 1960; Land et al., 2008).

Institutional culture and policy are the horizon within which these hinges turn. Leaders can do much to either compress or widen the space for liminal practice. On the widening side, policies might explicitly protect time for slow work, fund flexible spatial infrastructures, and recognize teaching innovations that embrace sensory and spatial design. Workload models can allocate hours for collaborative planning, reflective documentation, and iterative redesign, treating pedagogy as inquiry rather than mere delivery. Quality assurance can incorporate qualitative evidence, including ethnographic accounts, student narratives, and visual documentation of spatial practices, alongside conventional metrics, thereby legitimizing forms of value that do not reduce to test scores. On the compressing side, narrow accountability regimes, accelerated calendars, and standardized layouts can quietly erase liminality by making it difficult to slow down, to rearrange space, or to dwell with ambiguity. Policy choices thus have tangible effects on what kinds of learning become possible, and whether thresholds remain sites of possibility or shrink into moments of stress with little support for transformation (Berg & Seeber, 2016; Ellsworth, 2005).

A deeper theoretical horizon can strengthen these institutional moves. Materialist and relational approaches argue that learning emerges from intra actions among bodies, materials, and meanings, which suggests that liminal pedagogy is not only a humanistic stance but also a design of entanglements. Thinking with new materialist perspectives underscores that environments are not

passive scenery but co agents in educational events, and that ethical attention to the more than human is part of cultivating sustainable, democratic ways of dwelling together in shared worlds. Such perspectives help educators imagine how objects, textures, light, sound, and digital artifacts participate in threshold processes, sometimes enabling, sometimes resisting, and always requiring situated judgment in design and facilitation (Barad, 2007; Ingold, 2011; Soja, 1996; Lefebvre, 1991).

Ethics of care complete the picture. Invitations to risk are meaningful only where care is palpable and reciprocal. Caring relations are not sentimental add ons but the very conditions under which learners can risk identity work, speak uncertainty, and try new gestures. An ethic of care reframes classroom management as the cultivation of trustworthy routines and reparative responses when things fray, while a politics of care expands the frame to institutional resource allocation, accessibility, and recognition, ensuring that those most exposed to harm are not asked to subsidize the transformative journeys of others through their unprotected vulnerability. Care, in this sense, is both intimate and structural, a link between micro practices of attention and macro decisions about space, time, and funding (Noddings, 2013; Tronto, 2013; hooks, 1994).

Finally, research methodology must evolve in step with practice. Studying liminal pedagogy calls for methods that can track movement, atmosphere, and sense making across time, such as longitudinal qualitative designs, multimodal ethnography, and participatory inquiry where learners analyze their own threshold journeys. Such approaches can document how particular spatial configurations or sensory provocations correlate with shifts in understanding and belonging, while also surfacing the inequities that shape who can dwell safely in liminal zones. Mixed methods may be especially powerful, combining fine grained qualitative narratives with learning analytics or physiological measures of attention and stress, provided that such metrics are used interpretively and ethically rather than reductively. In addition, practitioner inquiry can position teachers as co researchers of their own design, contributing to a knowledge commons in which thresholds are mapped, narrated, and continually reimaged in dialogue across contexts and disciplines (Ellsworth, 2005; Gallagher, 2006; Gruenewald, 2003).

In sum, institutionalizing liminal pedagogy is not a matter of adding one more innovation to an already crowded agenda. It is a reframing of education as the design of thresholds, a shift that recognizes the centrality of senses and spaces, the necessity of temporal generosity, the inevitability of affect, and the ethical demand of justice and care. When teacher education forms somatic, spatial, and ethical

literacy, when assessment honors becoming as well as achievement, when programs and policies protect time, space, and ambiguity, liminality can become a durable feature of educational life rather than a fragile exception. In such an ecology, students and teachers alike learn to cross thresholds attentively and together, cultivating dispositions of openness, patience, and imagination that are urgently needed for the challenges and possibilities of our shared world (Biesta, 2013; Mezirow, 1991; Turner, 1969).

5. Ethics, Futures, and the Global Horizon of Liminal Pedagogy

While institutional reforms and teacher education are critical for embedding liminality within educational practice, the horizon of liminal pedagogy ultimately points beyond technical adjustments toward broader ethical and global challenges. The cultivation of threshold experiences is inseparable from questions of justice, ecological responsibility, and democratic life. Liminal spaces expose the fragility of established certainties, yet they also create opportunities for imagining alternative futures where learners and educators negotiate new forms of relation not only with knowledge and with one another, but also with environments, communities, and more-than-human worlds (Ingold, 2011; Barad, 2007). In this sense, liminal pedagogy becomes a practice of anticipatory imagination, preparing individuals to inhabit uncertainty as a shared condition of planetary existence.

The ethical dimension here is twofold. At the interpersonal level, liminality requires pedagogical relationships grounded in trust, recognition, and care, where vulnerability is not exploited but sustained with attentiveness and reciprocity (hooks, 1994; Noddings, 2013). At the systemic level, liminality demands educational policies and practices that resist reducing learning to standardized outcomes, and instead recognize the value of openness, delay, and experimentation. Such recognition aligns with democratic ideals of education, where ambiguity and plurality are not obstacles but conditions for inclusive participation (Biesta, 2013).

Future directions for liminal pedagogy involve integrating these ethical and ecological orientations more explicitly into curriculum design and institutional culture. This may include interdisciplinary programs that bridge sciences, arts, and humanities around shared thresholds of inquiry, as well as global partnerships that cultivate intercultural thresholds where learners encounter difference as a site of learning rather than as a deficit. Moreover, digital and hybrid environments, often marked by volatility and fluidity, can be reimagined not merely as logistical

solutions but as liminal arenas for cultivating new literacies of presence, collaboration, and ethical responsibility (Bayne, 2015).

By situating liminality within these broader ethical and global horizons, educators can move from treating thresholds as marginal or exceptional moments to embracing them as central to the project of sustainable education. In this perspective, liminal pedagogy does not simply manage transitions within existing structures but becomes a resource for rethinking how education can accompany learners through the radical uncertainties of the twenty-first century.

Conclusions

This article has argued that liminality is not a marginal disturbance in education but a constitutive condition of transformative learning. By placing senses and spaces at the center of inquiry, we have reframed learning as an embodied passage that unfolds within material and symbolic environments. Thresholds are not simply moments of conceptual difficulty, they are intensities of perception, affect, and relation that reorganize how learners inhabit knowledge, others, and place. When education attends to these intensities, it becomes capable of holding the uncertainty through which new meanings take form, allowing students and teachers to stay with the instability of becoming long enough for change to consolidate.

The implications of this perspective are both practical and ethical. Practically, a pedagogy of thresholds involves the careful design of experiences that invite learners to cross into unfamiliar terrain while remaining oriented and supported. This design is sensory, since it works through attention, movement, and the cultivation of perception. It is spatial, since it treats classrooms, corridors, courtyards, outdoor sites, and digital platforms as active partners in learning rather than neutral containers. It is temporal, since it protects the slow rhythms of consolidation and accepts that oscillation, hesitation, and return are part of how understanding matures. It is relational, since it depends on trust, hospitality, and the willingness to share authority and risk.

Ethically, liminal pedagogy requires an explicit commitment to care and justice. Thresholds are not experienced equally, and the invitation to risk can only be meaningful when recognition, safety, and access are present. A pedagogy that values liminality must therefore be attentive to power, to the different exposures that learners carry, and to the supports they need to dwell in uncertainty without

harm. This attention expands beyond classroom practices into decisions about resources, time, and institutional culture. Care, in this sense, is not an addendum but the condition that makes transformation livable.

The article has also shown that the sustainability of liminal practice depends on teacher formation, assessment, and policy. Educators need somatic and spatial literacies, the capacity to read atmospheres and modulate conditions in ways that steady learners at the edge of understanding. Assessment needs to recognize becoming as well as achievement, making space for narrative, reflection, and process. Policy needs to protect time and flexibility, reward inquiry in teaching, and accept qualitative evidence of value. When these elements align, liminality can become a durable feature of educational life rather than a fragile exception that withers under pressure.

A further contribution of this work lies in the way it reimagines the purpose of education. If learning is a continuous passage through thresholds, then education is less a delivery of certainties than a shared practice of navigating uncertainty. Such a practice cultivates dispositions needed for contemporary life, including the capacity to perceive before judging, to collaborate across difference, and to improvise within constraints. It also opens education to ecological and civic horizons, since senses and spaces connect learners to the textures of their environments and to responsibilities for shared worlds.

Future work can consolidate and extend this agenda. Empirically, we need thick descriptions of liminal design across disciplines and contexts, attentive to both enabling conditions and unintended consequences. Methodologically, we need approaches that can register atmosphere, movement, and temporal unfolding without reducing them to abstractions. Pedagogically, we need communities of practice that exchange prototypes, document failures and revisions, and articulate principles without fixing them into rigid templates. Institutionally, we need leaders willing to recognize ambiguity as a resource and to craft policies that keep open the spaces where transformation happens.

In conclusion, a pedagogy of thresholds treats learning as a careful crossing that is at once sensory, spatial, temporal, and ethical. It trusts that uncertainty can be generative when accompanied with attention and care. It invites learners to inhabit passages rather than rush past them, and it supports teachers in the artistry of opening and holding, provoking and protecting. By honoring liminality as the place where new relations to knowledge, self, and community become possible, education can renew its transformative promise, not by providing final answers,

but by cultivating the shared capacity to live, think, and act within the vibrant in between.

Author contributions: This work is the result of a collaborative effort among the authors. Specifically, Author 1 wrote Introduction and paragraphs 1, and 2. Author 2 wrote paragraphs 3 and 4, and Author 3 wrote paragraphs 5 and Conclusions. All authors contributed to the revision of the manuscript, approved the final version, and agree on its submission.

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