

Contexts that Enable Motor Creativity in Free-Form Movement Games

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ABSTRACT

This study aimed to explore the environmental, social, and individual contexts that enable motor creativity in free-form movement games, using participant-generated mapping to capture lived experiences. A qualitative research design was employed, drawing on semi-structured interviews with 21 participants from Pakistan who had direct experience in free-form movement games. Participants were recruited using purposive sampling and data collection continued until theoretical saturation was achieved. All interviews, lasting 45–60 minutes, were audio-recorded, transcribed verbatim, and analyzed thematically with the aid of NVivo 14 software. Coding followed an iterative process of open, axial, and selective coding to identify themes and subthemes that reflected participant perceptions of motor creativity. Strategies such as peer debriefing and maintaining an audit trail were used to ensure the trustworthiness of findings. Three overarching categories emerged from the analysis. Environmental enablers included flexible play spaces, availability of simple resources, safety and comfort, natural environments, spatial freedom, and sensory stimuli. Social and cultural contexts encompassed peer collaboration, cultural play traditions, family and community support, inclusive gender norms, coaching and facilitation styles, and social safety. Individual psychological and behavioral factors involved intrinsic motivation, risk-taking and experimentation, emotional expression, cognitive flexibility, self-efficacy, flow and absorption, and embodied awareness. Participant quotations illustrated how these elements interact to create conditions where novel motor actions and improvisations naturally arise. The findings highlight that motor creativity in free-form movement games is enabled by a dynamic interplay of environment, culture, and individual psychology. Recognizing and fostering these enabling contexts can inform the design of educational, recreational, and community programs that aim to promote creativity, inclusion, and well-being through movement-based play.

Keywords: Motor creativity; Free-form movement games; Participant-generated mapping; Thematic analysis; Qualitative research; Pakistan

Introduction

Mapping and representation of environments has long been recognized as central to understanding how humans navigate and interact with space. The cartographic sciences, for instance, have examined user experience with graphical interfaces of web maps, identifying how design elements shape exploratory behaviors and perception (1). Methodical frameworks have also been developed for interactive web maps that can convey cultural and historical sites, demonstrating how interactive tools affect perception and engagement (2). Similarly, research has extended the functions of cartographic images to enhance communication of geospatial information on mobile devices (3), as well as to improve perception of such images on different platforms (4). These efforts highlight the significance of mapping not only as a technological function but also as a mediator of embodied experience.

In human movement research, mapping takes on a more dynamic form. Trajectory mapping, for example, allows researchers to trace flows of people and movements, offering a human-centered approach to analyzing movement data (5). Trajectory prediction models such as the Attentive Maps Encoder Network (AMENet) integrate machine learning to anticipate movement paths in dynamic settings (6). These approaches underscore that mapping is not a passive representation but an active tool to anticipate, analyze, and even guide motor behavior. Within sports and free-form games, such approaches may offer insight into how players adapt strategies, invent movements, and negotiate contexts creatively.

Beyond spatial cartography, mapping is also explored in the domain of multimodal interaction. Breve and colleagues investigated how human movements can be translated into sound through MIDI mapping, revealing how auditory augmentation enhances spatial perception and bodily awareness (7). Similarly, Quinton et al. experimented with the sonification of planetary orbits, showing that mapping abstract trajectories into sensory modalities can stimulate new forms of perception and creativity (8). In the context of movement games, such multimodal mappings resonate with how participants often rely on sensory cues—sound, rhythm, or environmental signals—to drive novel motor actions.

Recent studies in neuroscience and robotics have further advanced the idea of mapping as a tool to support creativity in movement. Suguitan and colleagues introduced Face2Gesture, a neural network model that translates facial expressions into robot movements, thereby exploring cross-modal mappings between expressive and motor domains (9). Likewise, Iwane et al. demonstrated how human-avatar mapping can be customized based on EEG error-related potentials, showing that adaptive mapping enhances user engagement and personalization (10). These findings suggest that mapping systems tailored to individual differences can promote creativity and exploration, insights directly relevant to understanding how participants in free-form games generate novel actions under varying contexts.

At the cognitive level, the concept of mapping is also applied in studies of attention and information retrieval. Eye-gaze indicators, for example, have been used as relevance feedback mechanisms for improving retrieval tasks (11). Such research demonstrates that mappings between gaze behavior and information systems not only reflect attention but can be harnessed to optimize interaction. Similarly, gaze-driven pointer control systems in real time showcase how embodied attention can be mapped into motor control in technological contexts (12). The capacity to translate subtle embodied signals into meaningful control mechanisms mirrors the improvisational process in motor creativity, where micro-adjustments in perception and action lead to innovative outcomes.

Assistive technologies further highlight the potential of embodied mappings for creativity and autonomy. Eye-controlled electric wheelchairs, for instance, employ gaze-based inputs to enable navigation, illustrating how bodily signals can be mapped into motor functions that extend individual capabilities (13). Likewise, virtual mouse systems have been developed to create next-generation interaction experiences, leveraging user gestures for control (14). These studies underscore that mapping bodily input into interactive outputs can open new pathways for creative movement, particularly when conventional constraints are removed, as in free-form games.

The creative potential of mapping also appears in artistic and expressive domains. Voice-assisted, hands-free virtual painting systems, for example, map vocal commands into visual expression, offering new modalities for creative production (15). Aizawa's exploration of movie maps for virtual city exploration similarly illustrates how mapping visual information into interactive cinematic experiences enables novel forms of engagement (16). In each case, mapping operates as a bridge between embodied input and expressive output, expanding the repertoire of creative possibilities.

The significance of user experience in mapping systems has also been highlighted by comparative studies. Huang and colleagues, for instance, conducted eye-tracking experiments on rental applications to evaluate usability and experience, illustrating how interface design influences perception and action (17). Chen et al. applied participatory design methods to

human–vehicle interaction, emphasizing how collaborative mapping between users and systems can enhance communication (18). Similarly, Chen and Pirolli explored factors influencing engagement in social media, revealing that mapping engagement behaviors can help explain collective creativity in digital spaces (19). These findings point to the broader social and cultural dimensions of mapping, suggesting that participant perspectives are central in shaping contexts that foster creativity.

At the same time, mapping has been studied as a response to crowding and external pressures. A'Yun and colleagues used behavioral mapping to anticipate crowding at transport stations, showing how spatial organization impacts movement dynamics (20). In a related line of inquiry, Пырма examined network communities in social media flows under conditions of external pressure, revealing how information mapping reflects broader social dynamics (21). Both studies underscore the relevance of mapping as a tool to understand how individuals and groups adapt to complex contexts—insights that resonate with how free-form games often unfold in fluid, crowded, or unpredictable environments.

The relevance of mapping to motor creativity also emerges in rehabilitation and human–machine interfaces. Santis and Mussa-Ivaldi investigated body–machine interfaces that guide functional reorganization of motor redundancy, demonstrating how mapping bodily actions into assistive technologies can foster adaptation and innovation (22). Such findings reinforce the idea that mapping does not merely represent but actively shapes the scope of creative motor expression.

Taken together, these diverse studies highlight the multi-layered roles of mapping in facilitating creativity, interaction, and adaptation. From spatial cartography (1-4), to multimodal expression (7, 8), assistive technologies (13, 14), neuroscience (10), and social dynamics (20, 21), mapping emerges as a central concept linking perception, action, and creativity. Yet, despite its prominence in technological and scientific domains, there remains limited exploration of how participants themselves perceive and map the contexts that enable motor creativity in playful, free-form environments.

The present study addresses this gap by examining participant-generated mapping of contexts that facilitate motor creativity in free-form movement games.

Methods and Materials

Study Design and Participants

This study employed a qualitative research design to explore the contexts that enable motor creativity in free-form movement games. A purposive sampling approach was used to select participants who had direct experience in playing, observing, or facilitating free-form movement games. A total of 21 participants from Pakistan were included in the study, encompassing a range of backgrounds such as physical education teachers, recreational coaches, youth players, and university students involved in movement-based activities. Sampling continued until theoretical saturation was achieved, ensuring that no new themes or insights emerged from additional interviews. All participants provided informed consent prior to their inclusion in the study, and ethical principles of confidentiality and voluntary participation were strictly observed.

Data Collection

Data were gathered through semi-structured interviews, which allowed participants to share their lived experiences and perceptions while offering flexibility for follow-up questions to probe deeper into their responses. The interview guide included open-ended questions focusing on the conditions, environments, and social interactions that foster or constrain motor creativity during free-form movement games. Interviews were conducted in a setting convenient for participants, either face-to-face or through secure online platforms when necessary, and each session lasted between 45 and 60 minutes. With participants' permission, all interviews were audio-recorded and subsequently transcribed verbatim for analysis.

Data analysis

Thematic analysis was conducted using NVivo 14 software to manage, code, and organize the data systematically. The analysis followed a multi-stage process: initial open coding was performed to identify significant units of meaning, followed by axial coding to group related codes into broader categories. Finally, selective coding was undertaken to refine and integrate categories into overarching themes that highlighted the contexts enabling motor creativity in free-form movement games. The coding process was iterative and reflexive, with constant comparison across interviews to ensure consistency and rigor. To enhance trustworthiness, peer debriefing was conducted with qualitative research experts, and an audit trail of coding decisions was maintained throughout the analysis.

Findings and Results

The study included 21 participants from Pakistan, representing a diverse range of backgrounds connected to free-form movement games. Among them, 12 were male and 9 were female, with ages ranging from 18 to 36 years (mean age = 24.7 years). In terms of roles, 8 participants were university students involved in physical education and sports, 6 were recreational or community-level coaches, and 7 were active players who regularly engaged in movement-based games at informal or organized settings. The majority of participants ($n = 14$) reported having more than five years of experience with free-form or movement-based games, while the remaining ($n = 7$) had between two and five years of experience. This variation in age, gender, and professional involvement allowed the study to capture a wide spectrum of perspectives on the contexts that enable motor creativity.

Table 1. Thematic Analysis Table

Category (Main Theme)	Subcategory	Concepts (Open Codes)
1. Environmental Enablers of Motor Creativity	Flexible Play Spaces	Open grounds; Variable surfaces; Absence of strict boundaries; Movable objects
	Availability of Resources	Simple props; Nontraditional equipment; Everyday objects; Minimal cost tools; Shared resources
	Safety and Comfort	Non-judgmental environment; Physical safety; Familiarity of space; Comfort with peers
	Natural Environments	Parks; Open fields; Trees and natural obstacles; Seasonal variations
	Spatial Freedom	Large area; No fixed layout; Adaptable settings
2. Social and Cultural Contexts	Sensory Stimuli	Colors; Sounds; Lighting; Textures
	Peer Collaboration	Team improvisation; Mutual encouragement; Shared risk-taking; Negotiating rules
	Cultural Play Traditions	Indigenous games; Local stories in play; Folklore-based movements
	Family and Community Support	Parental encouragement; Community participation; Intergenerational play; Local acceptance
	Gender Norms	Male/female inclusion; Challenging stereotypes; Equal opportunities
3. Individual Psychological and Behavioral Factors	Coaching and Facilitation	Guiding rather than instructing; Encouraging experimentation; Balancing structure and freedom; Adaptive feedback
	Social Safety	Trust among peers; Respect; Absence of ridicule
	Intrinsic Motivation	Joy of movement; Curiosity; Sense of playfulness; Self-driven exploration
	Risk-Taking and Experimentation	Trying unusual moves; Accepting mistakes; Pushing personal limits
	Emotional Expression	Using body to express feelings; Play as outlet for stress; Freedom from performance pressure
	Cognitive Flexibility	Shifting strategies; Adapting to changing rules; Inventing new solutions

Self-Efficacy	Confidence in abilities; Perseverance; Independence
Flow and Absorption	Deep engagement; Losing track of time; Full concentration; Automatic improvisation
Embodied Awareness	Sensitivity to bodily signals; Awareness of rhythm; Balance and coordination cues

Environmental Enablers of Motor Creativity

Flexible Play Spaces. Participants emphasized that flexible play spaces were essential in enabling motor creativity. Open grounds and variable surfaces allowed children to test different possibilities, while the absence of strict boundaries encouraged free exploration. Movable objects, such as benches or cones, provided opportunities for improvisation. One participant explained: *“When the area has no lines or fences, I can try moves I usually don’t think about. It feels like I can invent my own game.”*

Availability of Resources. The presence of simple and nontraditional resources was repeatedly noted as a facilitator of creative play. Everyday objects such as sticks, chairs, or ropes were often transformed into play materials. Participants valued minimal-cost tools and the idea of sharing resources among peers. As one interviewee put it: *“We don’t need expensive equipment. Even a stick or a plastic bottle becomes something to create new movements with.”*

Safety and Comfort. A safe and comfortable environment was described as a precondition for experimentation. The assurance of physical safety, combined with familiarity of the space and a non-judgmental atmosphere among peers, allowed players to explore freely. One participant highlighted: *“If I feel safe and know nobody will laugh at me, I try new moves without worrying.”*

Natural Environments. Parks, open fields, and natural features such as trees and uneven terrain were frequently mentioned as sources of inspiration. Seasonal changes and natural obstacles created opportunities to adapt movements. As one participant reflected: *“Playing under trees or on grass makes me move differently; nature itself gives ideas for new actions.”*

Spatial Freedom. Large, adaptable areas without fixed layouts allowed participants to reorganize play according to their interests. The ability to shape the play environment contributed directly to creativity. A participant explained: *“When the field is big and empty, we can draw our own boundaries, make our own spaces—it makes the play more imaginative.”*

Sensory Stimuli. Elements such as colors, sounds, textures, and lighting were reported to spark novel movements. Sensory richness encouraged participants to engage bodily with the environment. One participant stated: *“The sound of music or even the texture of the floor changes the way I move; it opens up new ideas.”*

Social and Cultural Contexts

Peer Collaboration. Collaboration among peers created a supportive setting for experimenting with new ideas. Mutual encouragement, team improvisation, and the freedom to negotiate rules made creativity a collective activity. A participant explained: *“When my friends cheer and try strange moves together, it gives me courage to invent my own.”*

Cultural Play Traditions. Indigenous games, local stories, and folklore-based movements were significant cultural resources for creativity. These traditions acted as a base from which players modified or invented new actions. As one participant noted: *“Our traditional street games inspire us; we often mix old moves with new ones.”*

Family and Community Support. Encouragement from parents and community members fostered confidence in creative play. Intergenerational involvement and community acceptance reinforced the value of improvisation. A participant shared: *“When my father joins in or the community watches with smiles, I feel proud to show something new.”*

Gender Norms. Participants discussed how inclusive environments that challenged stereotypes provided more room for creativity. Equal opportunities for male and female players broadened the scope of movements. One participant stated: *“When both boys and girls play together, we see different ideas and styles. It helps us all to be creative.”*

Coaching and Facilitation. Rather than strict instruction, facilitation that encouraged experimentation was seen as beneficial. Coaches who balanced guidance with freedom, provided adaptive feedback, and encouraged risk-taking were described as key enablers. One interviewee remarked: *“Our coach tells us to just try, not to be perfect. That’s when we create something new.”*

Social Safety. Trust and respect within peer groups reduced the fear of failure. The absence of ridicule created a safe social environment for experimentation. As one participant reflected: *“When I know my friends won’t make fun of me, I feel free to explore movements.”*

Individual Psychological and Behavioral Factors

Intrinsic Motivation. Participants described their joy of movement, curiosity, and playful spirit as the inner drive behind creative acts. Self-driven exploration allowed them to move beyond imitation. One participant explained: *“I don’t do it because someone told me; I do it because I love moving and finding new ways.”*

Risk-Taking and Experimentation. Creative play was often associated with risk-taking, whether in trying unusual moves, pushing personal limits, or accepting mistakes as part of learning. A participant highlighted: *“Sometimes I fall, sometimes I fail, but that’s how I discover new moves.”*

Emotional Expression. Movement was also reported as a form of emotional release and expression. Free-form play allowed participants to channel stress and express feelings through the body. One participant stated: *“When I’m upset, I move differently. Play becomes a way to show emotions.”*

Cognitive Flexibility. The ability to shift strategies, adapt to new rules, and invent solutions was central to creativity. Participants described changing approaches quickly in response to evolving play situations. A participant explained: *“When rules change in the middle, I enjoy finding another way to keep the game going.”*

Self-Efficacy. Confidence and independence were repeatedly emphasized as crucial to taking creative risks. Belief in one’s abilities supported persistence in trying new actions. One participant said: *“I believe I can do it, so I keep trying until I succeed.”*

Flow and Absorption. Many participants described experiences of flow, where they lost track of time and became fully absorbed in the activity. This state facilitated automatic improvisation. A participant described: *“When I’m in the game, I don’t think; my body just creates.”*

Embodied Awareness. Sensitivity to bodily rhythms, balance, and coordination cues was another reported enabler of creative movement. Awareness of bodily signals provided inspiration for improvisation. One participant reflected: *“I feel the rhythm inside me, and it guides my movements.”*

Discussion and Conclusion

The present study aimed to identify the contexts that enable motor creativity in free-form movement games, relying on participant-generated mapping and thematic analysis of semi-structured interviews. Findings highlighted three broad categories: environmental enablers, social and cultural contexts, and individual psychological and behavioral factors. Each of these categories included multiple subthemes that, together, reflect the complex interplay of physical space, cultural norms, and personal dispositions in fostering creative movement. By analyzing the narratives of 21 participants from Pakistan, the study sheds light on how freedom of space, community support, and intrinsic motivation converge to produce unique motor expressions.

One of the clearest findings was the central role of flexible and adaptable environments in encouraging creativity. Participants described open grounds, variable surfaces, and the absence of rigid boundaries as conditions that allowed them to experiment with novel actions. This echoes prior research on mapping physical spaces for interaction, where flexibility in spatial design was found to directly impact user experience and exploratory behavior (1). Similarly, interactive mapping frameworks highlight how the design of environments—whether urban landscapes (2) or mobile interfaces (3)—influences how individuals perceive and act.

The role of resources also emerged as significant. Participants reported that simple, low-cost objects often became catalysts for creative play, as they could be repurposed in multiple ways. This aligns with studies in human–machine interaction where external inputs, even when minimal, can be mapped into multiple outputs, thereby enhancing expressive capacity (18). Likewise, investigations into body–machine interfaces demonstrated that seemingly redundant motor actions can be reorganized to produce functional innovation (22).

Safety and comfort were also reported as enabling factors. Participants highlighted that they were more likely to attempt unconventional movements when they felt secure and free from judgment. This finding resonates with the broader notion of “social safety” in mapping environments, where perceptual clarity and trust are essential for exploration (4). It also parallels studies in rehabilitation and assistive technologies that emphasize the importance of safe contexts for creative experimentation (13).

Natural environments such as parks and fields provided inspiration by presenting irregular surfaces, obstacles, and seasonal changes. This observation supports work on trajectory mapping, which shows how environmental cues and unpredictability guide movement pathways (5). Moreover, sonification studies suggest that multisensory stimuli—whether auditory (7) or visual (8)—can expand the creative repertoire by linking perception and action.

Finally, sensory stimuli like color, sound, and texture were identified as critical. Participants explained that environmental richness often led them to explore new bodily expressions. These accounts align with findings in multimodal mapping, such as the translation of facial expressions into robotic gestures (9), or the mapping of EEG signals to adaptive avatar behavior (10). Together, these studies affirm that enriched sensory environments act as triggers for creativity in both technological and human contexts.

Peer collaboration was reported as one of the most important enablers of motor creativity. Participants emphasized how collective improvisation and mutual encouragement provided both inspiration and confidence. This observation resonates with participatory design research, where user collaboration was shown to improve communication and creativity in human–system interaction (18). Similarly, community mapping of crowd dynamics demonstrated that collective movement fosters adaptation and novel strategies (20).

Cultural traditions also shaped how participants approached creative movement. Indigenous games and folklore-based gestures provided a foundation for improvisation, reflecting how cultural knowledge is often mapped into new forms of expression. This echoes comparative studies of user experience across cultures (17), which revealed how design and interaction are influenced by cultural norms and histories.

Family and community support emerged as another vital factor. Participants described how parental encouragement and community validation motivated them to take creative risks. Such findings align with research on the social structuring of communities under pressure, where external validation and social networks influence adaptive strategies (21). Likewise, behavioral mapping studies in crowded environments highlighted how social presence shapes movement patterns (20).

The issue of gender norms was also critical. Inclusive environments that challenged stereotypes provided more opportunities for creativity. This parallels work in assistive and gaze-controlled systems, which emphasized inclusivity and the broadening

of access through adaptive mappings (12, 13). Just as technology expands access by accommodating diverse abilities, inclusive play expands creative opportunities by accommodating diverse identities.

Coaching and facilitation styles further shaped outcomes. Participants favored coaches who acted as facilitators rather than strict instructors, encouraging risk-taking and self-directed exploration. This mirrors insights from studies on voice-assisted creative systems, which empowered users by balancing guidance with autonomy (15). It also supports evidence from human–avatar customization, where adaptive guidance maximized user engagement (10).

Lastly, social safety emerged as indispensable. Participants stressed that the absence of ridicule and the presence of trust among peers were prerequisites for risk-taking. This observation is consistent with prior findings on user trust in interactive systems, where respect and predictability were shown to shape exploratory engagement (1, 3). In both digital and physical spaces, trust acts as the foundation for creative freedom.

Intrinsic motivation was consistently cited as the primary driver of creativity. Participants explained that curiosity, joy, and self-directed play motivated them to explore new actions. This echoes earlier work on engagement mapping in social platforms, where intrinsic factors such as enjoyment predicted creative participation (19). Similar insights were observed in studies of virtual exploration, where user curiosity drove engagement with mapped cinematic experiences (16).

Risk-taking and experimentation were also central. Participants emphasized that willingness to fail and try unusual moves was crucial. This parallels findings in robotics and AI, where models such as Face2Gesture mapped unexpected inputs into functional outputs, thereby reinforcing the value of exploration (9). Moreover, trajectory prediction research demonstrated that deviation from expected paths is often where innovation occurs (6).

Emotional expression emerged as another key enabler. Participants described using movement to channel emotions and relieve stress. This is consistent with sonification and multimodal mapping studies, which showed that bodily signals can be effectively translated into expressive modalities (7, 8). Just as sound and visual systems capture human expressivity, free-form games capture emotional creativity in bodily form.

Cognitive flexibility was also reported as vital. The ability to adapt to changing rules and invent solutions mirrored cognitive models of adaptive mapping. For instance, gaze-driven control systems (12) and gaze-feedback indicators (11) both highlight flexibility as central to interaction. Participants' accounts similarly stress that flexibility under uncertainty generates novel motor solutions.

Self-efficacy contributed to persistence and innovation. Confidence in abilities encouraged participants to test boundaries, echoing studies where participatory design empowered users by increasing perceived competence (18). This parallels findings in mapping geospatial information, where clear, accessible interfaces enhanced user confidence (4).

Flow and absorption also characterized creative play. Participants described being so immersed that movements seemed to generate automatically. This aligns with findings on movie maps (16) and immersive virtual exploration, where deep engagement facilitated creativity. Similarly, rehabilitation systems that fostered full-body engagement supported functional reorganization (22).

Finally, embodied awareness emerged as a significant theme. Participants reported that sensitivity to rhythm, balance, and bodily cues guided their creativity. This finding echoes the broader tradition of embodied mapping, from EEG-avatar customization (10) to body–machine interfaces (22). Across contexts, awareness of the body as both input and output system was shown to drive innovation.

While the study provides rich insights into the contexts that enable motor creativity, it is not without limitations. First, the sample was limited to 21 participants from Pakistan, which restricts the generalizability of findings to other cultural or geographic contexts. Second, data collection relied solely on self-reported experiences through interviews, which may be

influenced by memory bias or social desirability. Third, although thematic saturation was achieved, the scope of themes may not fully capture the diversity of experiences present in larger or more heterogeneous populations. Finally, the absence of observational or experimental methods limits the ability to triangulate findings with actual behavioral data.

Future research should aim to expand both the scope and methodology of inquiry. Cross-cultural studies could provide comparative perspectives on how different traditions, norms, and environments shape motor creativity. Incorporating larger and more diverse samples would enhance generalizability. Methodologically, future work could integrate observational analysis, motion capture, or experimental manipulations to complement self-reported data. Longitudinal studies may also reveal how creative capacities evolve over time and across developmental stages. Additionally, integrating technological tools such as VR or AR mapping could offer new insights into the interaction between environment and creativity in free-form play.

Practically, the findings have implications for educators, coaches, and community leaders seeking to foster creativity in movement-based activities. Designing environments with flexible spaces, minimal resources, and enriched sensory stimuli can encourage improvisation. Promoting inclusive practices that challenge gender stereotypes and build trust among participants can create socially safe contexts for creativity. Facilitators should adopt coaching styles that prioritize exploration and risk-taking over rigid instruction. At the individual level, opportunities for self-expression, intrinsic motivation, and embodied awareness should be emphasized to cultivate creative engagement. Collectively, these practices can help build cultures of play that value and nurture motor creativity.

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Authors' Contributions

All authors equally contributed to this study.

Declaration of Interest

The authors of this article declared no conflict of interest.

Ethical Considerations

All ethical principles were adhered in conducting and writing this article.

Transparency of Data

In accordance with the principles of transparency and open research, we declare that all data and materials used in this study are available upon request.

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