Implementing Lifestyle Sports through Meaningful Physical Education in English Secondary Schools: A Mixed-Methods Study of Pupil Experiences

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Abstract

Introduction

Despite calls for reform, physical education (PE) in England remains dominated by traditional, performance-focused activities and pedagogies. Meaningful Physical Education (MPE) offers an alternative, emphasising autonomy, relevance, and enjoyment. Lifestyle sports (LS) such as parkour and CrossFit align closely with these principles, yet their integration within secondary PE—and within the English context—remains underexplored.

Methodology

Adopting a pragmatic, mixed-methods pre-post intervention design, a teacher-researcher (author 1) implemented two LS units (parkour and CrossFit-Kickboxing) in English secondary schools. Pupils (n = 50; aged 11–14) completed a bespoke Meaningful Physical Education Questionnaire (MPEQ) before and after the intervention and participated in post-unit focus groups. Quantitative data were analysed using Wilcoxon signed-rank tests; qualitative data underwent hybrid inductive–deductive thematic analysis.

Findings

The parkour unit generated statistically significant improvements across six of nine MPEQ features, including competence, challenge, choice, and overall meaning. The CrossFit-Kickboxing unit showed less overall change but a notable positive response among female pupils, with significant increases in choice and pedagogy-related dimensions. Qualitative data highlighted three themes: 1) Pupil experiences and MPE, 2) Novelty - further support for a new feature 3) Potential for LS. Together, these themes provided deeper insight into the quantitative findings, illustrating how MPE-informed pedagogies and LS shaped pupils' experiences of the intervention units.

Discussion

Findings support the capacity of LS, when taught through MPE pedagogies, to foster more meaningful, equitable, and motivating experiences, in comparison to traditional activities in PE. The data also extend existing MPE frameworks by demonstrating that novelty is an emergent feature linked to pupil engagement.

Conclusion

MPE and LS together offer a coherent framework for reimagining PE within English secondary schools, promoting autonomy, relevance, and inclusion.

Impact Statement

This study provides timely, evidence-based insights as England reviews its national PE curriculum. The evidence supports advocating for the inclusion of LS and pedagogies that help teachers prioritise meaningfulness to enhance pupil engagement, gender inclusivity, and lifelong participation.

Keywords: practitioner enquiry, meaningful experiences, physical activity, curriculum design, pedagogical approaches

Introduction

Physical education (PE) has long been recognised as central to young people's holistic development, supporting physical competence, social connection, and lifelong engagement in movement (Whitehead 2020). Yet, despite widespread agreement on its potential, change within the subject has often been slow and contested (Herold 2020). The traditional emphasis on sport techniques and performance continues to dominate curricula, even as pupils' interests and social contexts have diversified (Stidder 2023; Sullivan 2021). Rather than viewing PE as being in crisis, it is more accurate to acknowledge that progress has been gradual, constrained by enduring institutional traditions and professional cultures that favour continuity over innovation (Curtner-Smith 2017; Durden-Myers 2020).

Recent commentary in England and internationally points to renewed efforts to broaden PE's purpose beyond the reproduction of competitive sport and towards a focus on physical literacy (Durden-Myers and Evans, 2025; Whitehead 2021), holistic development (Condello et al. 2021; Etkin 2024), and lifelong physical activity (PA) (Bowler, Sammon and Casey 2022; Wintle 2022). Reform agendas increasingly advocate for pedagogies that reflect how young people choose to be active in their everyday lives (Stidder 2023), for example, through less formal activities with greater levels of autonomy. Sullivan (2021) similarly argues that, while teachers value inclusion and pupil-centred learning, structural factors, such as curriculum design and assessment, continue to constrain innovation. Kirk (2012) warns that without re-imagining PE's aims and practices, the subject risks further marginalisation, yet offers a hopeful vision of reform grounded in inclusive and meaningful participation.

Recent work in England highlights the urgency of this agenda. Hemingway et al. (2023) found declining enjoyment and engagement in PE across secondary schooling, with pupils describing early lessons as overly structured, competitive, and teacher-led. Greater autonomy and choice later in schooling were associated with improved motivation and well-being. In response, approaches that foreground meaning, relevance, and enjoyment are gaining traction. The recent English curriculum review echoes this shift (Department for Education 2025), as do emerging frameworks such as meaningful physical education (MPE) (Fletcher et al. 2021) and lifestyle sports (LS) (Beaumont and Warburton 2020). Both promote autonomy, personal relevance, and intrinsic motivation. This study explores how LS, delivered through MPE pedagogies, shaped pupils' experiences in two English secondary schools, offering new insight into how MPE can be realised within the evolving national landscape.

Literature Review

The theoretical foundation for this study lies in self-determination theory (Deci and Ryan 1985), a framework explaining motivation often applied to PA and PE. Self-determination theory is widely used to understand pupils' experiences and design interventions that enhance motivation and learning in PE (Van Doren et al. 2023; Vasconcellos et al. 2020). It positions motivation along a continuum from intrinsic to

extrinsic, with the goal of fostering intrinsic motivation, suggesting engagement is driven by interest and enjoyment rather than obligation or reward. To support sustained participation in PA, self-determination theory emphasises meeting three basic psychological needs: autonomy, competence, and relatedness (Ryan and Deci 2000). Autonomy reflects pupils' sense of control and choice in PE, such as selecting activities or partners. Competence involves feeling capable and effective, which strongly predicts motivation for PA (Lopes, Stodden and Rodrigues 2017). Relatedness refers to feeling valued and connected to teachers and peers; fostering this sense of belonging has been shown to increase motivation and extracurricular participation (Wallhead, Garn and Vidoni 2013). Extensive research from systematic reviews supports self-determination theory-informed pedagogies as effective for enhancing motivation and engagement in PE (Vasconcellos et al. 2020; White et al. 2021).

Drawing on self-determination theory, MPE seeks to create more meaningful experiences through pedagogical change and a focus on pupil agency. Alongside this, the inclusion of LS offers an opportunity to modernise curriculum content by reflecting contemporary movement cultures and broadening experiences beyond traditional competitive sport. These ideas are discussed further below.

Meaningful Physical Education

MPE is a pedagogical framework designed to support teachers in planning, delivering, and evaluating physical education experiences that prioritise pupils' subjective experiences of meaning, relevance, and engagement (Fletcher et al. 2021; Fletcher and Ní Chróinín 2021). Rather than prescribing specific activities, MPE provides a flexible structure that can be applied across curricular contexts, enabling teachers to design learning experiences that promote autonomy, inclusion, and sustained participation beyond school (Crane and Temple, 2015; Kretchmar 2006). The framework is operationalised through two interconnected components: a set of experiential features that characterise meaningful learning (fun, social interaction, motor competence, challenge, personal relevance, and delight) (Beni, Fletcher and Ní Chróinín 2017), and a set of pedagogical principles that guide how these experiences are intentionally enacted in practice, including democratic approaches, goal setting, and reflection (Fletcher and Ní Chróinín 2021).

Beni, Fletcher, and Ní Chróinín (2017) identified six features that underpin meaningful experiences in PE: fun, social interaction, motor competence, challenge, personal relevance, and delight. These features rarely exist in isolation; rather, they are relational and mutually reinforcing. Beckey (2021) illustrates this interdependence, describing how social interaction can give rise to enjoyment—for instance, when pupils report, "That was fun because I got to work with my friends." Recent Spanish research proposes additional features—novelty, teacher interpersonal style, and relief—although these require further validation using data gathered directly from pupils rather than pre-service teachers (Saiz-González et al. 2025).

Equally important to the MPE framework are its pedagogical principles: democratic approaches, goal setting, and reflection (Fletcher and Ní Chróinín 2021). These pedagogical principles provide the means through which teachers intentionally design learning environments that enable MPE features to emerge in practice, linking instructional decision-making with pupils' experiential outcomes (Fletcher and Ní Chróinín 2021). Democratic approaches, closely aligned with autonomy, position teachers and pupils as collaborators in learning. They establish a flatter hierarchy than traditional models, enabling students to influence lesson design, make authentic choices, and co-construct their learning experiences (Fletcher et al. 2021). Democratic approaches also support relatedness through the inherent nature of being heard and valued.

Goal setting and reflection operate as complementary "bookend" pedagogies within MPE. Goal setting promotes direction, autonomy, and personal relevance by allowing pupils to articulate what they wish to achieve and why it matters. Goals may be teacher-defined, co-created, or individually set depending on developmental readiness (Fletcher and Ní Chróinín 2021). Reflection, often used at the close of lessons but equally valuable throughout learning, encourages pupils to connect PE experiences to their broader lives, supporting intentional and continuous engagement. Together, these pedagogies nurture self-awareness, ownership, and sustained meaning in PE.

Although research directly applying MPE remains emergent, findings are consistently positive. Studies indicate that MPE fosters engagement (Cardiff et al. 2023), autonomy (Beni, Ní Chróinín and Fletcher 2021), relevance (Vasily et al. 2020), and overall meaning (Alshuraymi and Hastie 2024) for pupils, while promoting reflective, student-centred practice among teachers (Beni, Ní Chróinín and Fletcher 2021; Cardiff et al., 2023; Vasily et al., 2020). Successful implementation is commonly supported by alignment with teachers' philosophies, a collaborative school culture, and opportunities for student voice and choice.

Collectively, these findings position MPE as a flexible and transformative framework capable of enhancing engagement, relevance, and sustained participation in PA. Existing MPE research has predominantly been conducted within primary school contexts (typically involving pupils under 11 years of age), with many studies focusing primarily on teachers' experiences of implementation rather than pupils' lived experiences of meaningfulness (Beni, Ní Chróinín and Fletcher 2021; Vasily et al. 2020). Consequently, there remains limited empirical research examining MPE from the perspective of secondary-aged pupils (approximately 11–16 years) within the English context.

Lifestyle Sports in Physical Education

The breadth of physical activities people engage in has witnessed remarkable growth in recent times, particularly in the domain of lifestyle or alternative activities, recognised as one of the prevailing mega-trends of the twenty-first century (Beaumont and

Warburton 2020; Gilchrist and Wheaton, 2016). This surge encompasses various activities such as parkour, skate sports, diverse forms of cycling, new-age fitness activities, and outdoor pursuits like paddleboarding and climbing. Gilchrist and Wheaton (2016) have scrutinised the features of these activities, highlighting their defiance of conventional sport norms and their challenge to the 'achievement sport' culture. These activities typically demand significant commitment, revolve around participation rather than spectatorship, and attract participants from increasingly diverse backgrounds. Moreover, they often forge strong links with lifestyle, sub-culture, and identity, fostering sustained engagement and emphasising mastery over social comparison (Poulson 2016). Given these characteristics and the surging popularity of such activities, a compelling argument can be made for their increased inclusion in PE curricula, potentially enhancing sustained engagement more effectively than many traditional sports (Beaumont and Warburton 2020; Green and Johansen 2025; Wintle 2022).

Recent calls for greater use of LS in PE settings are evident in work by several scholars who have highlighted LS's potential to contribute to the development of PE curricula (Griggs and Fleet, 2021; Leeder and Beaumont, 2021). Given the often-narrow nature of many schools' curricula, typically centred on competitive (usually team) games (Banville et al. 2021), with limited input from pupils in curriculum design (Hardwicke et al. 2022), the use of LS offers a potential new avenue for PE teachers to explore. In England, PE is guided by a statutory curriculum that sets broad aims but does not prescribe specific activities or pedagogical models, giving teachers substantial autonomy. Within this context, LS are not formally specified and are therefore typically included at the school's or department's discretion, creating space for alternative curricular and pedagogical approaches such as MPE. Several small-scale studies (e.g. Grabowski 2015; McNamee and Timken 2017; Vasily et al. 2020) have explored the implementation of diverse activities in PE, including parkour, cycling, Zumba, and several outdoor pursuits. Findings consistently reflect positive outcomes in terms of student engagement, enjoyment, and, notably, intentions to participate in the future. Moreover, these activities have proven effective in reaching students who typically exhibit little interest in traditional (often competitive) sports. McNamee and Timken's (2017) study highlighted that the uniqueness of such activities helped level the playing field, break the monotony, infuse energy, and provide less competitive children with opportunities to shine.

In this study, the challenges facing PE are conceptualised as both curricular and pedagogical. That is, concerns relate not only to the dominance of traditional, competitive sport content, but also to the pedagogical approaches through which this content is commonly enacted. LS were therefore selected as a curricular vehicle that inherently aligns with autonomy, individual challenge, and non-normative participation, while MPE pedagogies were intentionally employed to structure learning experiences. The intervention was thus designed to examine the combined influence of what is taught

and how it is taught, rather than treating these elements as separate or competing reform strategies.

Based on the literature reviewed, integrating an MPE approach with high-growth LS warrants further empirical investigation. By incorporating these activities into the curriculum, delivered through a complementary pedagogical approach (MPE), PE programmes may engage young people in activities that are not only enjoyable but also relevant to their daily lives, increasing the likelihood that their experiences are seen as meaningful. The following overarching research question guides the remainder of this study: How effective is a LS intervention, guided by MPE, in fostering meaningful experiences for young people in PE?

Methods

Guided by a pragmatic research philosophy (Dewey 1986; Clarke and Visser 2019), the study employed a mixed-methods pre-post intervention design to evaluate pupils' experiences of two LS units delivered through an MPE approach. Although the intervention formed part of a wider doctoral programme informed by an action research orientation, the focus of the present paper is the evaluation of the intervention rather than the action research process itself. Alongside this, a convergent mixed-methods design was employed in which quantitative (questionnaire) and qualitative (focus group and open-response) data were collected in parallel, analysed separately, and integrated at the interpretation stage to provide complementary insights into pupils' experiences (Vors and Bourcier 2021).

The study adopted a mixed-methods pre-post intervention design with the teacher-researcher (Author 1) implementing two LS units using MPE pedagogy across two different secondary schools in England. The intervention was informed by principles of practitioner inquiry and continuous improvement. Throughout the delivery of the units, planning, implementation, observation, and reflection were used to refine teaching and respond to pupils' experiences as the intervention progressed, reflecting principles of practitioner inquiry (McNiff 2017). Rather than involving repeated redesign of the entire intervention, iterative micro-cycles of planning, action, observation, and reflection were embedded within individual lessons, allowing pedagogical decisions to be adapted in response to emerging evidence. While these reflective processes informed the delivery of the intervention, the present paper primarily focuses on a mixed-methods evaluation of pupils' experiences and perceptions of the intervention. Pupil feedback, informal reflections, and teacher-researcher field notes were used to shape the content, structure, and pedagogical emphasis of subsequent lessons (McNiff 2017). While a preplanned unit outline provided overall structure, lesson-level adaptations kept the intervention responsive to pupils' needs and contextual factors.

Participants and Setting

Following a recruitment drive through local professional network meetings for lead PE teachers in one county in south-west England, two schools were selected to host the LS

intervention units through a hybrid of convenience and purposive sampling (Cohen et al., 2018). School one (pseudonym: Park School) was a mixed grammar school (state-funded, academically selective state school). The school selected a Year 8 (ages 12-13 years) mixed-gender class (11 males, 12 females) to take part in an 8-hour parkour unit delivered by the lead researcher in the role of teacher-researcher (Stenhouse, 1975). School two (pseudonym: Cross School) is a non-selective academy school (also state-funded) located in the suburbs of a large city. A Year 7 (ages 11-12 years) mixed-gender class (12 males, 15 females) was selected by the school to take part in an 8-hour CrossFit-Kickboxing unit. Classes within the schools were selected through pragmatic opportunity sampling, determined by curriculum timetabling, teacher-researcher availability, and access to suitable teaching spaces, rather than by researcher-led sampling. The intervention was delivered by the teacher-researcher (Author 1), an experienced secondary PE teacher (10 years) and teacher educator (12 years). The teacher-researcher planned and delivered both intervention units, ensuring consistent implementation of the MPE approach across the two school settings.

In this study, "normal PE" referred to each school's existing curriculum provision. At the grammar school, instruction was predominantly traditional and sport-based, with limited curricular innovation. In the non-selective academy school, some minor variation in activity content was evident in older age groups (ages 14-16 years) alongside occasional pupil-centred practices; however, these reflected individual teacher preferences rather than a systematic or intentional application of MPE pedagogies or LS-aligned curriculum design. Intervention units were co-designed by the lead researcher and participating teachers to ensure curricular feasibility, alignment with school timetables, and contextual relevance. A flexible unit framework was developed in advance, outlining core learning themes, progression intentions, and assessment opportunities. This framework enabled lesson-level adaptation, informed by pupil feedback and teacher-researcher reflection, while maintaining alignment with the MPE pedagogical principles. MPE principles were embedded through the intentional use of democratic pedagogies (e.g., structured opportunities for pupil choice in task design, grouping, and challenge level), goal setting at the beginning of learning sequences, and regular reflection opportunities to support pupils in connecting lesson experiences with personal meaning and progress. Teachers acted as collaborative partners in unit/lesson planning, while pupils were positioned as active contributors through choice-based tasks, reflective dialogue, and feedback that informed ongoing lesson adaptation. All intervention units were delivered by the lead researcher using a standardised lesson plan template explicitly aligned with the MPE approach to ensure consistency of pedagogical implementation across schools.

Data Collection

Data for this study were collected using two methods: a mixed-methods MPE questionnaire (MPEQ) and post-unit focus groups with pupils. Combining questionnaire data with qualitative focus group accounts enabled triangulation and supported a more nuanced interpretation of how content and pedagogy were jointly experienced.

Meaningful Physical Education Questionnaire

To evaluate pupils' experiences of physical education in relation to the MPE framework, a bespoke Meaningful Physical Education Questionnaire (MPEQ) was developed, as no quantitative measures of MPE existed at the time of the intervention. We acknowledge subsequent work in this area by Alshuraymi and Hastie (2024) and Saiz-González and Fernández-Río (2025). Consequently, a new instrument was designed to measure pupils' perceived meaningfulness of PE. experiences. Questionnaire construction followed recognised principles of effective design (Gray 2022; Thomas 2023), emphasising age-appropriate language, balanced Likert scaling (Likert, 1932), clarity, and bias avoidance. Each MPE construct (including features, pedagogical principles and overall meaning) was measured using three Likert-scale items to enhance internal consistency, supplemented by three open-ended questions to elicit qualitative insights. Although competition has been recognised as a contentious concept within the MPE literature, it was retained as a sub-feature to reflect the reality of pupils' lived PE experiences and to capture individualised forms of competition (e.g., personal challenge and self-referenced improvement) that may contribute to meaningful engagement. Content validity was established through an iterative review with a panel of international MPE experts, who examined the alignment of items with MPE constructs, the clarity of wording, and the conceptual coverage. This initial review of the draft questionnaire was undertaken by an international community of practice comprising 16 MPE experts from across the globe, including the originators of the approach. Following this initial review, subsequent revisions were refined through consultation with two members of the group who had a particular interest in questionnaire development, allowing more detailed iterative feedback on the instrument. Revisions were made in response to expert feedback to improve readability, sequence, and conceptual fidelity. A final version of the questionnaire is available in the supplementary material.

Following expert validation, the instrument was piloted with a sample of secondary pupils (aged 13–14 years) to assess usability and comprehension. Minor adjustments were made to instructions and layout to ensure accessibility and to minimise response fatigue. The Flesch–Kincaid readability index (Flesch 1948) confirmed that the questionnaire was age-appropriate. Reliability was assessed through test–retest and internal consistency analysis. Day-to-day reliability produced a weighted kappa of 0.844, indicating good stability (Aldridge, Wade and Dovey 2017). Cronbach's alpha coefficients across all constructs ranged from 0.63 to 0.88, reflecting acceptable to excellent internal consistency (Salkind 2006).

Overall, the MPEQ demonstrated robust alignment, reliability, validity, and usability, making it a credible tool for assessing pupils' experiences of meaningfulness in PE. The process ensured both methodological rigour and practical relevance, enabling the generation of reliable, context-sensitive data on the impact of MPE-informed

pedagogical interventions. To enable comparison, pupils completed the MPEQ twice: once reflecting on their typical PE experiences ("normal PE" representing their usual curriculum content and pedagogical delivery) and once following the intervention units (CrossFit–Kickboxing and Parkour). Pupils were instructed to consider both the activities undertaken and how lessons were taught when responding to the questionnaire.

Pupil Focus Groups

To gain deeper insight into pupils' experiences of the intervention units, focus groups were conducted to foreground pupils' voices within the research (Enright and O'Sullivan 2012). Focus groups were chosen over one-to-one interviews to reduce power imbalances, promote peer dialogue, and stimulate richer, more reflective discussion (Liamputtong 2016). A total of seven semi-structured focus groups were conducted across two schools, involving 32 pupils aged 11–14. Groups comprised three to six participants (typically friends who worked together in lessons) to encourage comfort and openness (Liamputtong 2016). Each discussion lasted around 20–25 minutes and followed a flexible guide aligned with key MPE concepts. Sessions took place in familiar school settings during lunchtimes in the week after the intervention finished and were audio-recorded for transcription.

Best-practice procedures for working with young participants were adopted (Adler, Salanterä and Zumstein-Shaha 2019). The researcher created a supportive, non-hierarchical environment, arranging seating in a circle, providing light refreshments, and using visual stimuli (e.g., MPE feature cards, video clips, and a "meaningful–meaningless" continuum) to prompt reflection. The researcher acted as a moderator, facilitating pupil-to-pupil interaction through neutral, open prompts such as "What do others think about that?". Common methodological challenges associated with focus groups—such as group conformity, domination by individuals, and lack of confidentiality—were mitigated through careful group composition, balanced participation, and explicit assurances that there were no right or wrong answers (Liamputtong 2016).

Overall, the focus group process provided a robust, ethical, and contextually sensitive method for capturing pupils' lived experiences and perceptions of meaningfulness in PE. The design enabled the generation of rich, dialogic data that complemented the quantitative findings from the MPEQ, enhancing the depth and trustworthiness of the study's overall analysis.

Data Analysis

Quantitative and qualitative data were analysed separately but considered together to provide a holistic understanding of pupils' experiences. Integration occurred during interpretation, where qualitative findings were used to contextualise, explain, and deepen understanding of patterns identified in the questionnaire data.

Questionnaire Data Analysis

Analysis of the MPEQ followed a structured process to ensure accuracy, rigour, and integrity (Jensen 2022). All returned questionnaires were first checked for completeness and clarity before data were transferred into Microsoft Excel for organisation. Each item was linked to one of the MPE features, pedagogies, or overall meaning, with related questions grouped accordingly. Responses on the 5-point Likert scale were coded numerically (1 = strongly disagree to 5 = strongly agree) (Likert 1932), allowing aggregated scores (out of 15) to be calculated for each construct. As the data were non-parametric and ordinal, medians were used as the measure of central tendency (Derrick and White 2017). Pre- and post-intervention medians were compared for each feature, pedagogy, and overall meaning to assess perceived changes in meaningfulness. Statistical testing was conducted using the Wilcoxon signed-rank test (Wilcoxon 1945). This test enabled the identification of significant differences between pre- and post-intervention responses both across the combined dataset and within individual school contexts. This process ensured that statistical analysis remained appropriate to the data type while capturing subtle shifts in pupils' perceptions of meaning in PE.

Qualitative Data Analysis

Qualitative data from the open-ended questionnaire items and pupil focus groups were analysed using a hybrid inductive–deductive thematic analysis following Braun and Clarke's (2022) reflexive framework. This approach enabled themes to be both data-driven and theoretically informed by the MPE framework, aligning with the study's pragmatic orientation (Proudfoot 2022).

Transcripts and written responses were organised and coded in Microsoft Excel through an iterative process of familiarisation, initial coding, and theme development. Codes were generated inductively from pupil responses and deductively from key MPE constructs, before being reviewed, refined, and clustered into coherent themes that captured shared patterns across the dataset. Theme development involved repeated comparison between codes, raw data extracts, and the conceptual framework to ensure internal consistency and conceptual alignment.

This systematic and transparent analytic process enhanced the credibility and coherence of the qualitative findings and supported meaningful integration with the questionnaire data, enabling triangulation and a nuanced interpretation of how MPE pedagogies shaped pupils' experiences. The process was initially completed independently by the first author and subsequently discussed and agreed upon by the second and third authors.

Ethical Considerations

Ethical integrity underpinned the study, with pupils positioned as active contributors through voice, reflection, and feedback rather than passive subjects. The research adhered to the institutional guidelines and BERA Ethical Guidelines for Educational Research (2019). All pupils provided assent and returned parental consent forms,

thereby opting to participate in the study's research component. Pupils were informed that questionnaire completion and focus group participation were voluntary and that they could withdraw at any time without consequence (Cohen, Manion and Morrison 2018). All pupils participated in the intervention lessons as part of their timetabled PE curriculum. Anonymity and confidentiality were ensured through pseudonyms and redaction of identifying details. Participants were informed of their right to withdraw, though none did so.

All interventions were risk-assessed and co-designed with teachers to meet the Association for Physical Education Safe Practice Guidelines (Caldecott et al. 2020). Additional safeguards—monitoring engagement, maintaining neutrality, and fostering respect—protected children's welfare throughout (Slepičková and Bartošová, 2014). Ethical approval was granted by the University Research Ethics Committee (REC.23.16.10).

Results

The findings are presented in two stages. Quantitative results from the MPEQ are presented first, followed by qualitative findings from the pupil focus groups to provide deeper insight into pupils' experiences of the intervention units.

The pre-intervention questionnaire asked pupils to reflect on their typical experiences of PE lessons prior to the intervention. Following completion of the intervention unit, pupils completed the same questionnaire, this time reflecting specifically on their experiences of the parkour unit. The pedagogical items assessed pupils' experiences of practices aligned with MPE (e.g., choice, goal setting, and reflection), rather than requiring any prior knowledge of the MPE framework. Quantitative results from the MPEQ yielded insights into both normal PE and the intervention units; Figure 1 and Table 1 summarise the parkour intervention results.

Figure 1 - Parkour MPEQ Pre vs Post-Intervention

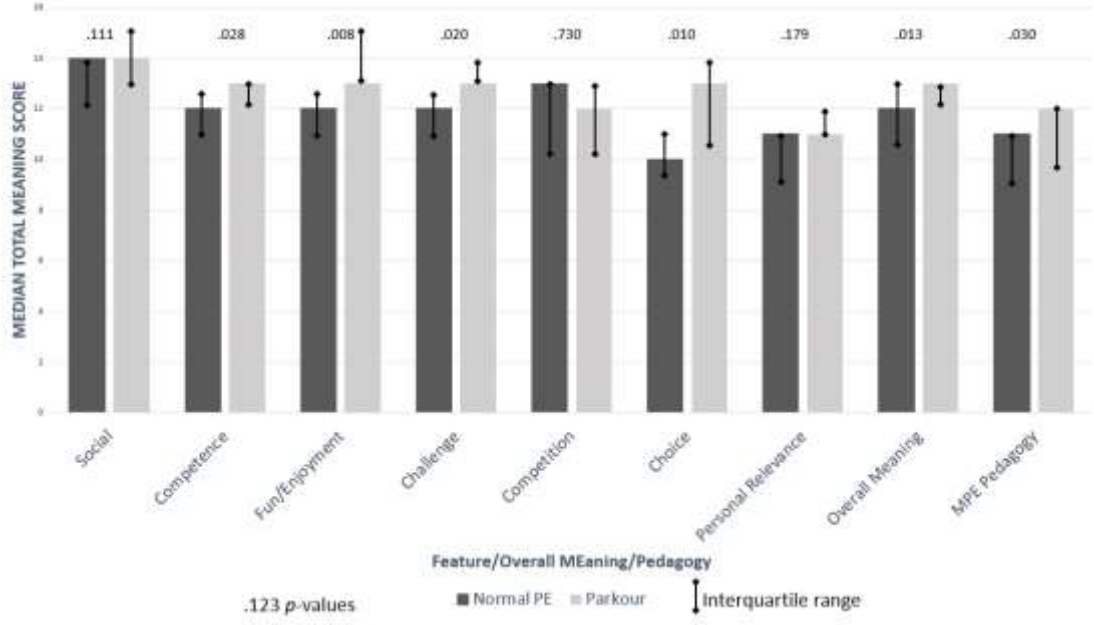

Table 1 – Parkour MPEQ Pre vs Post-Intervention

Feature/Pedagogy/ Overall Meaning	Median Normal PE Overall Score (Interquartile Range)	Median Parkour Unit Overall Score (Interquartile Range)	Wilcoxon (statistically significant $p = < 0.05$*)
Social	14 (2.0)	14 (2.0)	.111
Competence	12 (1.5)	13 (1.0)	.028*
Fun/Enjoyment	12 (1.5)	13 (2.0)	.008*
Challenge	12 (1.5)	13 (1.0)	.02*
Competition	13 (3.0)	12 (2.75)	.73
Choice	10 (1.5)	13 (1.75)	.01*
Personal Relevance	11 (2.0)	11 (1.0)	.179
Overall Meaning	12 (2.5)	13 (1.0)	.013*
MPE Pedagogy	11 (2.0)	12 (2.0)	.03*

The data from the parkour unit provide an overall picture of the intervention's positive impact, with statistically significant increases in six of the nine MPEQ areas (see Table 1). In practical terms, this suggests that pupils perceived the parkour unit as providing stronger experiences of key MPE features than their usual PE lessons. Scores for competition decreased slightly between the pre- and post-intervention conditions. As formal competition was not included in the parkour unit and is typically rejected in many LS, this result is unsurprising and may also reflect the competitive nature of many traditional PE activities within the school curriculum (Hemingway et al. 2023; White et al. 2021; Whitehead 2021).

Examination of the interquartile ranges provides additional insight into how consistently pupils responded to the questionnaire items. A reduction in interquartile ranges indicates that responses were more tightly clustered around the median, suggesting greater agreement among pupils in how they experienced the unit. Several features, including competence, challenge, personal relevance, and overall meaning, showed reduced interquartile ranges following the parkour intervention. This suggests that pupils' perceptions of these aspects became more consistent, indicating a broadly shared experience of the unit across the class.

In contrast, features such as fun/enjoyment and choice showed a slight increase in interquartile ranges. While median scores for these areas increased, the wider spread of responses suggests that pupils' experiences of these elements varied more across the group. This may reflect the more individualised ways in which pupils engaged with the parkour activities, where some pupils found particular elements especially enjoyable or empowering, while others experienced them differently. Taken together, the data

suggest that the parkour unit not only increased perceptions of meaningfulness but also produced a broadly shared experience across several key pedagogical features. Shifting focus to the CrossFit-Kickboxing intervention, its impact was less evident in the overall findings, as shown in Figure 2 and Table 2.

Figure 2 - CrossFit-Kickboxing MPEQ Pre vs Post-Intervention

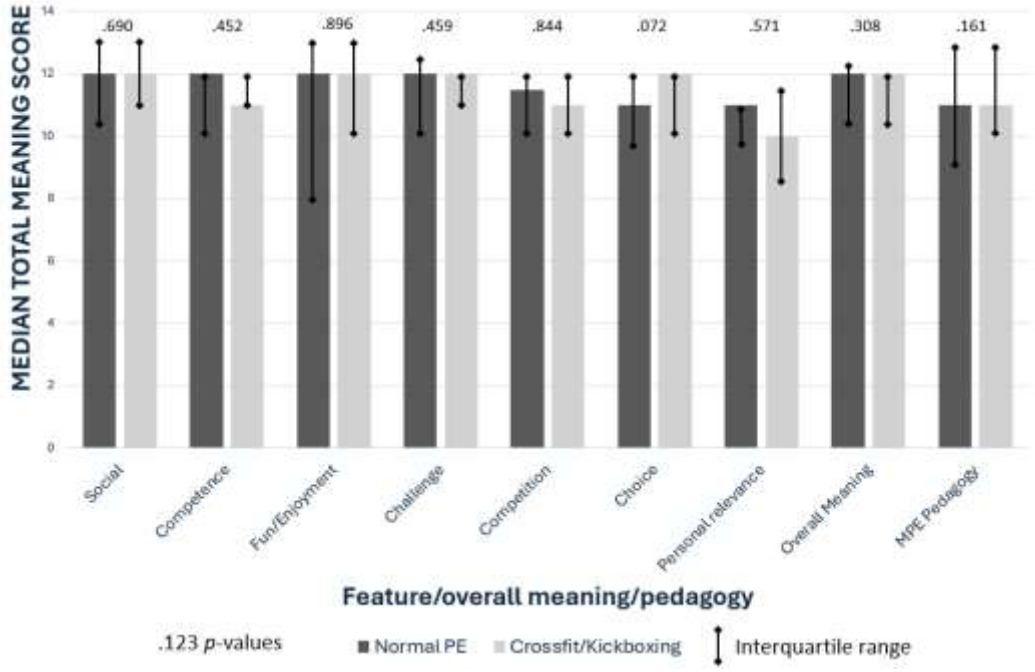

Table 2 - CrossFit-Kickboxing MPEQ Pre vs Post-Intervention

Feature/Pedagogy/ Overall Meaning	**Median Normal PE Overall score** (interquartile range)	**Median CrossFit/ Kickboxing Overall score (**interquartile range**)**	**Wilcoxon (statistically significant *p*= < 0.0*)**
Social	12 (2.5)	12 (2.0)	.69
Competence	12 (2.0)	11 (1.0)	.452
Fun/Enjoyment	12 (5.0)	12 (3.0)	.896
Challenge	12 (2.5)	12 (1.0)	.459
Competition	11.5 (3.0)	11 (3.0)	.844
Choice	11 (2.5)	12 (2.0)	.072
Personal relevance	11 (2.5)	10 (3.0)	.571
Overall Meaning	12 (2.0)	12 (1.5)	.308
MPE Pedagogy	11 (4.0)	11 (3.0)	.161

The overarching headline for the data above is that none of the features, pedagogies, or overall meaning showed a statistically significant difference between the pre-unit (normal PE) and post-unit (CrossFit-Kickboxing) data. The lower interquartile range across nearly all features of the intervention data-set suggests that the middle 50% of the distribution is relatively consistent and clustered around the median, perhaps indicating a less extreme experience across the sample than in normal PE. However, examination of individual responses revealed several strong positive changes that were not fully visible in the aggregated dataset. Table 3 shows the number of pupils who reported higher scores in each questionnaire category, providing an overview of pupils in the data; it is also split by gender. As shown, the intervention generated positive responses for many female pupils, with a shift towards statistical significance in nearly all areas, with choice and MPE pedagogy being statistically significant for the females in the unit. The qualitative data provide additional insight into these findings. While the overall quantitative changes were not statistically significant, focus group discussions revealed that many pupils described the unit positively (see theme 1 below). However, these experiences were not shared equally among all pupils, resulting in a wider range of responses in the dataset. This variation may help explain why the aggregated quantitative scores did not reach statistical significance, despite several pupils reporting engaging experiences during the unit.

Table 3 – Frequency of Pupils Reporting Positive Changes in Scores Pre vs Post-Intervention

Feature/Pedagogy/ Overall Meaning	Number of pupils who reported higher scores (out of 27 pupils)	Number of Males with positive change (out of 12)	Number of Females with positive change (out of 15)	Female Only Wilcoxon (statistically significant p = < 0.05*) Pre vs Post
Social	10	2	8	.051
Competence	6	1	5	.131
Fun/Enjoyment	11	2	9	.198
Challenge	13	5	8	.098
Competition	12	5	7	.195
Choice	14	4	10	.003*
Personal Relevance	10	3	7	.200
Overall Meaning	6	1	5	.333
MPE Pedagogy	16	5	11	.003*

When examining the data by gender, the intervention appeared to generate a stronger response among female pupils. In particular, female pupils reported statistically significant increases in perceptions of choice and MPE pedagogical approaches compared with their experiences in regular PE lessons, with social interaction also

approaching statistical significance. In practical terms, this suggests that the female pupils in the sample perceived the intervention unit as offering greater autonomy, more supportive pedagogical approaches, and more positive social experiences than their typical PE lessons. Given the body of research suggesting we need to improve girls' experiences in PE (e.g., Cameron and Humbert 2020), this finding is worth noting. The seemingly positive impact on the females in the group further highlights the need to consider subgroup preferences when planning PE experiences. However, we must be cautious when prioritising one group over another, and this should be considered in macro planning (learner journeys, mapping the curriculum scope, sequence, and pupils' needs) over a year or across years. The subsequent analyses in the discussion will shed further light on this area as we begin to unpick the qualitative data to offer further insight.

Qualitative results generated three key themes and provided further insight into the statistical analysis above. The themes were:

1) Pupil experiences and MPE,
2) Novelty - further support for a new feature
3) Potential for LS.

Pupil Experiences and MPE

MPE provided a suitable framework for analysing pupils' experiences in PE, as well as data supporting all of the original features (see Table 4).

Table 4 – MPE Features Within the Intervention

Feature	Pupil Quotes
Social Interaction	"Social and choice were the most important for me, because if you don't like the people you work with, you're not gonna really like it, and yeah, if you're social with other people, you're gonna like it even more." (Megan, Focus Group 3, CrossFit-Kickboxing)
Motor Competence	"We learnt new skills, and personally, I feel like before, I couldn't do a parkour roll. I didn't know what it was, and then after, I'd learned a whole new, like, skill, so that was good." (Louise, Focus Group 1, Parkour)
Fun	It was very fun, and it's like, what I liked about it was, if something was too hard with parkour, there's always another way around it" (Tom, Focus Group 4, Parkour)
Challenge	"You get to set yourself, like, your own challenge and not someone else setting your challenge" (Courtney, Focus Group 3, CrossFit-Kickboxing)
Personally relevant learning	"I got to learn something that I would probably use at some points, like, in real life and also something that I could, like, expand my knowledge with further"

	(Lorna, Parkour, Focus Group 2)
Delight	"I really liked it [the unit] because it was different to normal PE lessons and more fun. We had to get into our own groups and choose which activities we could do" (Katerina, CrossFit-Kickboxing, Post Unit Questionnaire)

Within the units, pupils found a connection with the pre-existing features of MPE. The quotes often refer to or allude to two or more features working together, in a similar vein to previous work in this area by Beni, Ní Chróinín and Fletcher (2021).

To support children in experiencing the features of MPE in their PE lessons, the pedagogical principles of MPE (and self-determination theory) were of utmost importance. This was particularly evident in the use of democratic approaches (such as providing autonomy) that allowed pupils elements of choice about their learning.

> "So having the opportunity to like basically create our own lesson, in a way, it was better, because in normal PE it's not, you just get given a task like to do" (Lee, CrossFit-Kickboxing, Focus Group 2)
> "I found that [freedom] more appealing than the usual teaching approach, because it, um, made me choose what level we wanted to be at here, so it helped us, like, progress faster than in normal PE lessons" (Abdul, Parkour, Focus Group 2)

The quotations above are illustrative examples of a broader theme identified across the focus group discussions regarding the value pupils placed on democratic approaches.

Novelty – Further Support for a New Feature?

Data from the pupil focus groups highlighted the use of non-traditional activities in PE. When reflecting on the unit, in focus groups, pupils were initially asked to describe the unit they had experienced using a continuum of harmful-meaningless-meaningful (intentionally chosen to reflect the range of experiences reported in the literature), and to share an explanation for their rating.

> "Near meaningful 'cause it was fun…and not something we'd normally do as well" (Alice, Parkour, Focus Group 1)
>
> "I would say probably in the meaningful area. Because it's like a fun new sport." (Jason, CrossFit-Kickboxing, Focus Group 1)
>
> "Erm, I would say meaningful because, erm, it's way better than PE" (Tim, CrossFit-Kickboxing, Focus Group 2)

The quotes above highlight views echoed by many pupils: they saw the units as meaningful experiences. Given that we had spent time in lessons and focus groups exploring how we understand a meaningful experience, there is a reasonable degree of confidence in this assessment.

The sense of excitement around a novel activity was a key attraction for several pupils in the study; in both the parkour and CrossFit-Kickboxing units, pupils commented on the excitement of being exposed to activities they had little to no experience with.

> "It's something new and exciting that you've never done before and it could broaden your skill range and open up new opportunities for you." (Emily, Parkour, Focus Group 1)

> "It's, like, new, and, like, entertaining. Just like new, fresh sport that you probably haven't learnt. It was enjoyable and fun to do through the lessons" (David, CrossFit-Kickboxing, Focus Group 1)

Collectively, these responses suggest that novelty played a meaningful role in shaping pupils' perceptions of the intervention units. Exposure to unfamiliar activities appeared to stimulate curiosity, enjoyment, and a sense of possibility, enabling pupils to experience PE in ways that differed from their usual lessons. In this sense, the findings provide tentative support for recent work proposing novelty as a potential additional feature of MPE (Saiz-González et al. 2025), highlighting the value of introducing unfamiliar activities within PE curricula to stimulate engagement and broaden pupils' movement experiences.

Potential for Lifestyle Sports

Pupils in the study spoke about their experiences in the units in relation to their normal PE curriculum, compared them with traditional activities, and provided insightful analysis.

> "I would say [it was] meaningful, because it, it was better than just doing normal PE all the time. It was a bit of a change. Because kickboxing isn't like a well-known sport or what we do in PE normally is, like football or rugby or something." (Zane, CrossFit-Kickboxing, Focus Group 2)

In a similar vein, Harry highlights the fluid nature of parkour compared to traditional sports that are heavily technique-driven or rigid.

> "I think also the, the parkour is a lot less, like, rigid, um, because sometimes in PE it's a bit like, 'This is what you're going to do and this is how you need to do it,' um, whereas in parkour there are lots of different ways of achieving the same thing." (Harry, Parkour, Focus Group 2)

The PE curriculum has often been criticised for relying heavily on traditional, often competitive, team games. Whitehead (2021) highlighted this point, arguing that PE should offer students experiences across a range of movement forms (one of the three key principles of a physical literacy-informed approach). This should include adventure, aesthetic, competitive, fitness/health, and relational activities. Parkour fits as a relational activity, whereas CrossFit-Kickboxing (as delivered in the unit) aligns with a fitness/health perspective.

Discussion

The findings of this study provide further insight into how MPE and lifestyle sports LS can shape pupils' experiences of secondary school PE. Taken together, the quantitative and qualitative results suggest that the intervention units created conditions that supported several key features of meaningful experiences, particularly social interaction, fun, challenge, and autonomy. These findings contribute to the growing body of work examining how pedagogical approaches and curriculum design can influence pupils' perceptions of meaning within PE.

Beni, Ní Chróinín and Fletcher (2021) described MPE features as symbiotic, operating in relational ways where features interact and reinforce one another. Evidence of this was visible within the focus group data. Pupils frequently linked social interaction to feelings of fun and enjoyment, suggesting that these elements did not operate independently but instead worked together to shape meaningful experiences. Among the secondary-aged pupils in this study, social interaction appeared to act as a catalyst rather than a peripheral feature. Peer relationships created a sense of emotional safety and belonging, which in turn appeared to enhance enjoyment and sustain engagement within the intervention units.

A prominent theme identified across the focus group dataset was the role of democratic pedagogical approaches, particularly pupil choice and autonomy. Across the discussions, pupils consistently emphasised the importance of having opportunities to make decisions about how they participated in the activities, including selecting challenges, forming groups, and adapting tasks. Pupils consistently emphasised the importance of having opportunities to make decisions about how they participated in the activities, including selecting challenges, forming groups, and adapting tasks. These findings align with existing research demonstrating that autonomy-supportive environments can enhance pupils' enjoyment and engagement in PE (Ahmadi et al. 2022; Hemingway et al. 2023). In a similar vein, Fletcher and Ní Chróinín (2021) argue that democratic pedagogies are central to the MPE approach because they position pupils as active contributors to their learning experiences. In the present study, pupils frequently contrasted the intervention lessons with their usual PE classes, describing the latter as more teacher-directed. The opportunity to exercise agency within the intervention units appeared to enhance their sense of ownership and engagement with the activities.

The findings also highlight the potential role of novelty within MPE. Pupils repeatedly described the activities as new, different, or exciting compared with their usual PE lessons. This sense of novelty appeared to capture pupils' interest and stimulate engagement with the activities. Previous research has suggested that introducing variety within the curriculum can increase pupils' autonomous motivation and situational interest (White et al. 2021; Chen 2015). More recently, novelty has been proposed as a potential additional feature of MPE (Saiz-González et al. 2025), and the data presented here offer tentative support for this proposition. Exposure to unfamiliar activities appeared to generate curiosity and enthusiasm among pupils, suggesting that novelty may act as an important catalyst for meaningful engagement.

However, the role of novelty within PE curricula must be considered carefully. While unfamiliar activities may initially stimulate engagement, sustaining meaningful learning experiences requires sufficient time for pupils to develop competence and confidence within an activity. The recent Ofsted (2023) research review of PE highlighted concerns that some curricula prioritise breadth of activity over depth, limiting opportunities for pupils to develop secure knowledge and skills. The findings of the present study, therefore, suggest that novelty may be most effective when balanced with opportunities for sustained learning and skill development.

Finally, the findings reinforce arguments that LS may offer valuable opportunities to broaden PE curricula. Previous research has highlighted how many school PE programmes remain dominated by traditional team games, which may not appeal to all pupils (Banville et al. 2021). The pupil perspectives reported here suggest that activities such as parkour and CrossFit-Kickboxing provided experiences that differed from their usual PE lessons, particularly in their emphasis on flexibility, creativity, and individual exploration. These characteristics align with the defining features of LS identified by Gilchrist and Wheaton (2016), which challenge traditional achievement sport cultures and emphasise participation, personal mastery, and identity. While the quantitative findings for the CrossFit-Kickboxing unit were less pronounced than those for parkour, the qualitative data and subgroup analysis (Table 3) indicated that many pupils perceived both interventions positively. Collectively, these findings support calls for greater curricular diversity in PE (Green & Johansen, 2025; Leeder & Beaumont, 2021), suggesting that LS may offer an important avenue for enhancing engagement and relevance in contemporary PE programmes.

Conclusion

The qualitative findings suggest that LS can contribute towards providing meaningful experiences for pupils within PE. The combination of LS activities and the MPE approach was pivotal in shaping these positive experiences. The individualistic yet non-traditional nature of LS appeared to align well with the MPE framework, fostering autonomy, inclusivity, and enjoyment among secondary pupils – particularly for those traditionally marginalised (e.g. girls and those less engaged in sport and PA).

This study represents a timely and significant contribution to the field, emerging as England undertakes a review of its national PE curriculum. The findings support the inclusion of a broader range of lifestyle and alternative activities in future curriculum frameworks, aligning with calls for PE that is more relevant, engaging, and reflective of how young people choose to be active in their daily lives.

Methodologically, the mixed-methods design, combining quantitative and qualitative pupil data, enhanced the robustness and ecological validity of the findings. This integration provided a richer, more authentic understanding of how meaning can be cultivated through both activity design and pedagogy, capturing the lived realities of pupils in real school settings.

While the study remains small in scale, it offers strong indicative evidence that MPE and LS together provide a coherent and practical framework for transforming PE experiences in English secondary schools. Further research is encouraged to explore scalability, long-term impact, and continued validation of the MPEQ across diverse populations. Nonetheless, the study provides timely, evidence-informed advocacy for a reimagined curriculum - one that positions meaningful, inclusive, and life-relevant experiences at the heart of PE provision.

Acknowledgements – with thanks to the schools and pupils involved. In the study.
No potential conflict of interest was reported by the author(s).

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