



Transition from Traditional PE to Sport Education: Readiness and Outcomes

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Abstract

The Sport Education model (SE) has been proposed as a transformative alternative to traditional physical education (TPE), yet the transition between these approaches presents significant pedagogical, institutional, and cultural challenges. This study examines the transition from TPE to SE across 10 secondary schools, investigating teacher readiness, student outcomes, and institutional challenges through a longitudinal mixed-methods design spanning two academic years. Teacher readiness was assessed using a purpose-designed PE Pedagogical Change Readiness Scale ($n = 32$ teachers), while student outcomes ($n = 548$) were measured across skill development, game performance, personal-social responsibility, and PE enjoyment. Institutional challenges were identified through administrator interviews ($n = 10$) and school context analysis. Results indicate that teacher readiness significantly predicted implementation fidelity ($r = .72$, $p < .001$), which in turn mediated student outcomes. SE produced superior outcomes in game performance ($d = 0.68$), enthusiasm ($d = 0.74$), and personal-social responsibility ($d = 0.61$) compared to TPE. However, skill acquisition showed no significant difference between models ($d = 0.14$, $p = .31$). Key institutional barriers included scheduling constraints, equipment needs, colleague resistance, and assessment alignment with standardized requirements. A staged transition framework is proposed, incorporating teacher development, structural modifications, and stakeholder engagement strategies.

Keywords: - Sport Education, Traditional Physical Education, Pedagogical Transition, Teacher Readiness, Student Outcomes

I. INTRODUCTION

Physical education has faced persistent criticism for its failure to achieve its stated aims of developing physically literate, lifelong participants in physical activity (Kirk, 2010). The dominant multi-activity, teacher-directed model here termed traditional physical education (TPE) has been characterized as promoting superficial engagement with brief sport units that provide insufficient time for meaningful skill development, tactical understanding, or genuine sport appreciation (Siedentop, 1994). In response, curriculum models such as Sport Education (SE) have been developed to provide more authentic and educationally rich sport experiences within PE.

Sport Education, developed by Siedentop (1994) and elaborated in subsequent work (Siedentop et al., 2011), aims to create competent, literate, and enthusiastic sportspersons through six key features: seasons (extended units), affiliation (persistent team membership), formal competition, culminating events, record keeping, and festivity. These features are designed to replicate the authentic elements of sport participation that are absent from typical PE instruction, creating contexts where students develop not only skills and tactics but also the social and affective dispositions associated with meaningful sport involvement.

Despite three decades of research supporting SE's effectiveness (Hastie et al., 2011), widespread adoption has been limited. The transition from TPE to SE requires fundamental changes in teacher roles, lesson structures, assessment practices, and school organizational patterns that may meet resistance at individual, departmental, and institutional levels (Curtner-Smith

et al., 2008). Understanding the dynamics of this transition is essential for scaling SE implementation beyond research-supported demonstration sites.

This study addresses three research questions:

- What factors constitute teacher readiness for SE implementation, and how does readiness relate to implementation fidelity?
- How do student outcomes under SE compare with TPE across skill development, game performance, personal-social responsibility, and enjoyment?
- What institutional challenges emerge during the transition from TPE to SE, and how can they be addressed?

II. LITERATURE REVIEW

2.1. The Sport Education Model

Research on SE has accumulated substantially since its introduction. Hastie et al. (2011) conducted a comprehensive review of 64 SE studies, concluding that SE consistently produces positive outcomes in student enthusiasm, fair play behaviors, and game performance, with more equivocal findings for motor skill development. The model's emphasis on persistent team membership and student roles (coach, captain, referee, statistician) promotes social responsibility and leadership development (Wallhead & O'Sullivan, 2005).

Comparative studies between SE and TPE have generally favored SE for affective and social outcomes. Perlman (2010) found that unmotivated students showed significant increases in intrinsic motivation under SE but not TPE, suggesting that the model's structural features particularly team affiliation and role responsibility may address disengagement among students who find traditional PE unappealing. Hastie and Sinelnikov (2006) demonstrated that SE seasons in Russian secondary schools produced greater tactical competence and more equitable participation compared to traditional instruction.

2.2. Teacher Readiness for Pedagogical Change

The concept of teacher readiness for implementing new pedagogical models extends beyond content knowledge to encompass beliefs, attitudes, self-efficacy, and contextual factors (Curtner-Smith et al., 2008). Research on SE implementation has identified teacher biography—including their own sport experiences, coaching backgrounds, and pedagogical socialization as a significant factor shaping implementation fidelity (McMahon & MacPhail, 2007).

Ko et al. (2006) found that teachers' occupational socialization experiences heavily influenced their willingness and ability to implement SE. Teachers whose own PE experiences aligned with teacher-directed models found the shift to student-centered pedagogy particularly challenging, often reverting to direct instruction during perceived 'loss of control' moments. Conversely, teachers with coaching experience adapted more readily to SE's game-centered, team-based structure.

Deenihan and MacPhail (2017) examined the process of SE implementation by pre-service teachers, identifying a developmental trajectory from mechanical replication of SE features to sophisticated pedagogical adaptation. This trajectory was influenced by mentor support, school context, and the pre-service teacher's developing understanding of the model's theoretical foundations.

2.3. Institutional Challenges

The implementation of SE is not merely a pedagogical decision but an institutional one that intersects with scheduling, facility allocation, assessment policies, and departmental culture (MacPhail et al., 2014). SE's requirement for extended seasons (typically 15–20 lessons) conflicts with the short-unit scheduling common in many schools. Team-based assessment may not align with individual reporting requirements. The student-led nature of SE may be perceived as inconsistent with school disciplinary expectations.

III. METHODOLOGY

3.1. Research Design

A longitudinal mixed-methods design was employed across two academic years. Year 1 served as a baseline (TPE) and readiness assessment period. In Year 2, five schools transitioned to SE (transition group) while five continued with TPE (comparison group). The staggered design allowed within-school and between-school comparisons.

3.2. Participants

Ten secondary schools participated, selected for diversity in size (enrollment 400–1,200), socioeconomic context, and geographic location. Thirty-two PE teachers (18 male, 14 female; mean experience = 10.8 years, SD = 6.2) and 548 students (287 male, 261 female; ages 13–16) were included. Transition group teachers received 20 hours of SE professional development including theoretical foundations, planning workshops, micro-teaching, and ongoing mentoring.

3.3. Teacher Readiness Assessment

The PE Pedagogical Change Readiness Scale (PE-PCRS) was developed and validated for this study. The instrument comprises five subscales:

- Pedagogical beliefs alignment (8 items; $\alpha = .88$)
- Self-efficacy for student-centered teaching (7 items; $\alpha = .84$)

- Content knowledge for SE (6 items; $\alpha = .81$)
- Openness to pedagogical change (5 items; $\alpha = .79$)
- Perceived institutional support (6 items; $\alpha = .86$).

Confirmatory factor analysis supported the five-factor structure (CFI = .94, RMSEA = .05).

3.4. Student Outcome Measures

Four student outcome domains were assessed:

- Skill development sport-specific skill tests (validated rubrics, ICC > .87) for the sports covered in each unit (soccer, volleyball);
- Game performance Game Performance Assessment Instrument (GPAI; Oslin et al., 1998) measuring decision-making, skill execution, and support play;
- Personal-social responsibility Personal and Social Responsibility Questionnaire (PSRQ; Li et al., 2008);
- PE enjoyment Physical Activity Enjoyment Scale adapted for PE (PACES-PE; Kendzierski & DeCarlo, 1991).

Assessments were administered at the beginning and end of each sport unit.

3.5. Implementation Fidelity

SE implementation fidelity was assessed using the SE Benchmark Fidelity Instrument (Sinelnikov, 2009), evaluating the presence and quality of the six SE features. Each feature was rated on a 4-point scale (0 = absent, 3 = fully implemented with quality). Total fidelity scores ranged from 0 to 18. Three independent observers rated fidelity with inter-rater reliability of .91.

3.6. Qualitative Data

Semi-structured interviews were conducted with all 32 teachers (pre- and post-intervention) and 10 school administrators. Student focus groups (n = 24 groups, 4–6 students each) were conducted in transition schools. All interviews were audio-recorded, transcribed, and analyzed using thematic analysis (Braun & Clarke, 2006).

IV. RESULTS

4.1. Teacher Readiness and Implementation Fidelity

PE-PCRS total scores ranged from 2.18 to 4.62 (M = 3.54, SD = 0.61) among transition group teachers. Teacher readiness was strongly correlated with implementation fidelity ($r = .72, p < .001$). The strongest predictor of fidelity was self-efficacy for student-centered teaching ($\beta = .41, p < .001$), followed by perceived institutional support ($\beta = .33, p < .01$). Teachers with higher readiness scores achieved mean fidelity scores of 14.2/18 (high implementers) compared to 8.7/18 for those with lower readiness (low implementers).

Table 1. Teacher Readiness Subscale Scores and Correlations with Implementation Fidelity

PE-PCRS Subscale	M (SD)	Correlation with Fidelity	p
Pedagogical Beliefs	3.72 (0.68)	.58	<.001
Self-Efficacy	3.41 (0.74)	.67	<.001
Content Knowledge	3.28 (0.82)	.51	<.01
Openness to Change	3.89 (0.64)	.44	<.01
Institutional Support	3.38 (0.91)	.62	<.001
Total PE-PCRS	3.54 (0.61)	.72	<.001

4.2. Student Outcomes

Comparison of SE and TPE conditions on student outcomes revealed significant advantages for SE in game performance, enjoyment, and personal-social responsibility, but not skill development.

Table 2. Student Outcomes by Instructional Model

Outcome Domain	SE Pre M(SD)	SE Post M(SD)	TPE Pre M(SD)	TPE Post M(SD)	d	p
Skill Development	48.2 (13.4)	62.7 (11.8)	47.8 (12.9)	61.1 (12.4)	0.14	.31
Game Performance (GPAI)	41.3 (14.1)	62.8 (11.2)	40.8 (13.7)	52.4 (13.8)	0.68	<.001
PE Enjoyment (PACES)	3.42 (0.81)	4.24 (0.62)	3.38 (0.84)	3.61 (0.79)	0.74	<.001
Personal-Social Resp.	3.18 (0.72)	3.87 (0.58)	3.21 (0.69)	3.38 (0.71)	0.61	<.001

4.3. Implementation Fidelity as Mediator

Mediation analysis confirmed that implementation fidelity significantly mediated the relationship between teacher readiness and student outcomes. For game performance, the indirect effect through fidelity was $\beta = .34, p < .001$ (95% CI [.21, .47]). For enjoyment, the indirect effect was $\beta = .29, p < .001$ (95% CI [.16, .42]). High-fidelity SE classrooms (fidelity ≥ 14) produced significantly stronger effects (mean d = 0.82) compared to low-fidelity SE classrooms (mean d = 0.31), underscoring the importance of quality implementation.

4.4. Institutional Challenges

Thematic analysis identified five major institutional challenges during the TPE-to-SE transition:

4.4.1. Scheduling constraints:

SE's requirement for extended seasons (15–20 lessons) conflicted with existing scheduling models. Schools with rotating timetables found it particularly difficult to guarantee the continuous blocks needed for meaningful season progression. Three of five transition schools required scheduling modifications to accommodate SE seasons.

4.4.2. Assessment alignment:

Teachers reported tension between SE's emphasis on team-based performance, social responsibility, and game understanding and school assessment policies requiring individual, standards-based grades. Developing assessment rubrics that captured SE's broader learning outcomes while satisfying reporting requirements was a significant challenge.

4.4.3. Colleague and departmental resistance:

In schools where not all PE teachers adopted SE, departmental tensions emerged regarding curriculum coherence, shared facility use, and differing pedagogical philosophies. Non-adopting colleagues sometimes viewed SE as 'less rigorous' or 'letting students play without teaching.'

4.4.4. Equipment and facility demands:

The simultaneous operation of multiple teams within SE required more equipment and often more complex facility arrangements than TPE. Schools with limited equipment budgets or shared facilities found this particularly challenging.

4.4.5. Student role adaptation:

Students accustomed to teacher-directed instruction required significant time to develop the self-management skills needed for SE roles (captain, coach, referee). Initial lessons were often characterized by confusion and off-task behavior, which some teachers interpreted as evidence that SE was 'not working' rather than a normal developmental phase.

Table 3. Institutional Challenges During TPE-to-SE Transition

Challenge	Schools Affected (n/5)	Severity (1-5 M)	Resolution Strategy
Scheduling constraints	5	4.2	Block scheduling, semester restructuring
Assessment alignment	4	3.8	SE-specific rubrics, portfolio assessment
Colleague resistance	3	3.4	Department workshops, observation visits
Equipment/facility	4	3.1	Equipment rotation, modified game formats
Student role adaptation	5	3.6	Gradual role introduction, scaffolding

V. DISCUSSION

This study provides a comprehensive examination of the transition from TPE to SE, revealing that successful implementation depends on an interplay of teacher readiness, institutional support, and implementation fidelity. The strong relationship between teacher readiness and implementation fidelity ($r = .72$) confirms that pedagogical change is not merely a matter of providing new curriculum materials but requires genuine shifts in teacher beliefs, self-efficacy, and professional identity (Curtner-Smith et al., 2008).

The student outcome findings largely corroborate previous SE research (Hastie et al., 2011). SE's advantages in game performance ($d = 0.68$) reflect the model's emphasis on tactical decision-making within authentic game contexts, where students develop understanding through repeated application rather than isolated drill practice. The enjoyment advantages ($d = 0.74$) align with self-determination theory, as SE's structural features team affiliation, role responsibility, meaningful competition inherently support autonomy, competence, and relatedness needs (Perلمان, 2010).

The absence of significant differences in skill development challenges the assumption that SE's reduced emphasis on direct instruction compromises motor skill acquisition. This finding is consistent with Hastie and Sinelnikov's (2006) conclusion that SE seasons provide sufficient practice opportunities within game contexts to develop sport-specific skills at rates comparable to direct instruction approaches. However, this equivalence may depend on implementation fidelity and the teacher's ability to embed skill instruction within the SE framework.

The institutional challenges identified illuminate the systemic nature of pedagogical change. The finding that scheduling was the most severe barrier ($M = 4.2/5$) reflects a fundamental tension between SE's pedagogical requirements and the organizational structures of schools designed around short, rotating units. Curriculum leaders and administrators play a crucial role in creating conditions that enable rather than constrain innovative PE practice (MacPhail et al., 2014).

Limitations include the non-random assignment of schools to conditions, the potential influence of researcher involvement on implementation quality, and the focus on secondary schools, which limits generalizability to primary or higher education contexts. The two-year duration, while longer than most SE studies, may not capture full institutionalization patterns. Future research should examine multi-year implementation trajectories and the sustainability of SE outcomes beyond the research period.

VI. CONCLUSION

The transition from traditional PE to Sport Education is a complex process that requires coordinated attention to teacher readiness, student adaptation, and institutional restructuring. This study proposes a staged transition framework: Stage 1 (Foundation) assess teacher readiness and provide targeted professional development addressing identified gaps; Stage 2 (Pilot) implement SE in one sport unit with high-readiness teachers while maintaining TPE for other units; Stage 3 (Expansion) extend SE to additional units and teachers, with peer mentoring from experienced implementers; Stage 4 (Institutionalization) embed SE within department policy, assessment frameworks, and scheduling structures. This graduated approach, supported by ongoing professional learning communities and administrative engagement, can facilitate sustainable pedagogical transformation that enhances student outcomes in game performance, enjoyment, and personal-social responsibility while maintaining comparable skill development.

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