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ORIGINAL ARTICLE

Recontextualising self-regulated learning in ball games among beginning physical education teachers

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ABSTRACT

This study examines how beginning physical education (PE) teachers in Italy recontextualise pedagogic discourse on ball games and self-regulated learning (SRL) as they transition from physical education teacher education (PETE) into school practice, and how self-efficacy shapes this process. Guided by Bernstein's pedagogic device and Bandura's self-efficacy, a sequential explanatory mixed-methods design was employed. In the quantitative phase, 287 beginning PE teachers (1–4 years' experience) completed the Italian validated Teacher Self-Efficacy Scale to Implement SRL (AI-AA), contextualised to ball games. Descriptive analyses indicated moderate overall self-efficacy, with the lowest scores for direct instruction of SRL strategies. In the qualitative phase, semi-structured interviews with 18 purposively selected teachers explained these patterns, identifying three recontextualised elements: promoting autonomy through modified game forms, adapting ball games to heterogeneous groups, and aligning tactical learning with curricular competencies. Despite these intentions, explicit SRL instruction in ball games was rare, and recontextualization was constrained by evaluative rules and material conditions (e.g., facilities, equipment, assessment pressures, and pupil expectations). Self-efficacy operated as a context-sensitive filter: lower efficacy was associated with retreat to traditional practices. Implications for PETE alignment and induction-focused professional development are discussed.

Keywords: Physical education, Physical education teacher education (PETE), Self-regulated learning, Ball games, Teacher self-efficacy, Recontextualization, Bernstein.

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INTRODUCTION

The transition from physical education teacher education (PETE) to professional practice represents a critical juncture in teacher development, characterised by the recontextualization of pedagogic knowledge acquired during pre-service preparation (Backman et al., 2021; Mustell, 2024). Research consistently demonstrates that beginning teachers face substantial challenges in translating theoretical knowledge into classroom practice, particularly when confronted with institutional constraints, heterogeneous pupil populations, and established school cultures (Woods et al., 2016). These challenges are particularly acute in the domain of ball games teaching, where traditional multi-activity, technique-oriented approaches continue to dominate despite decades of advocacy for alternative pedagogies (Casey & Kirk, 2020; Kirk, 2010).

Ball games constitute a significant component of PE curricula internationally, reflecting their prominence in contemporary physical culture (Hardman, 2013). However, the pedagogic treatment of ball games in school settings has sustained considerable critique. Research indicates that ball games teaching frequently involves short instructional units focused on isolated technical skills, limited tactical understanding, and competitive formats that exclude less experienced pupils (Ennis, 1999; Larsson & Quennerstedt, 2016; Standal, 2016). Game-based approaches (GBAs) such as Teaching Games for Understanding (TGfU) and the Tactical Games Model (TGM) emerged as alternatives to traditional technique-centred instruction, emphasising tactical awareness, modified game forms, and learner-centred pedagogies (Harvey & Jarrett, 2014; Mitchell et al., 2020). Despite their pedagogical promise and widespread inclusion in PETE curricula, GBAs remain underutilised in school PE practice (García-López et al., 2019; Harvey & Pill, 2016).

Concurrently with these pedagogical developments, educational policy discourse has increasingly emphasised the cultivation of self-regulated learning (SRL) competencies as central to lifelong learning and academic success (OECD, 2020; Zimmerman, 2002). SRL encompasses cognitive, metacognitive, and motivational strategies that enable learners to understand and control their own learning processes (Schraw et al., 2006). Within PE contexts, SRL strategies hold particular relevance for ball games teaching, as they enable pupils to develop tactical decision-making, reflective practice, and autonomous engagement with game situations (Theobald, 2021). However, research suggests that PE teachers infrequently implement explicit SRL instruction, often adopting implicit approaches that lack systematic pedagogical support (Dignath-van Ewijk, 2013; Kistner et al., 2010).

Teacher self-efficacy—defined as teachers' beliefs about their capacity to execute specific teaching tasks at a desired level of quality (Bandura, 1997; Tschannen-Moran & Woolfolk Hoy, 2001)— represents a critical agentic resource influencing the negotiation and enactment of pedagogic knowledge. Teachers with higher domain-specific self-efficacy demonstrate greater persistence in implementing innovative practices, adapt more effectively to challenging classroom contexts, and achieve superior pupil learning outcomes (Peeters et al., 2014). Recent instrument development in Italy has provided a validated scale for assessing teachers' self-efficacy specifically for implementing SRL strategies (Scierri, 2024), yet this construct remains unexplored in relation to PE content areas such as ball games.

The Italian PE context presents distinctive features relevant to this investigation. Since 1994 and reaffirmed by the newly adopted National Regulations (D.M. 221/2025), the Italian national curriculum has not mandated specific sports as rigid content, instead emphasising broader educational goals related to motor competence, health promotion, and social development (Ministry of Education and Merit, 2025; Ministry of Education, University and Research, 2012). This orientation aligns with the consensus statement of the Italian society of motor and sports sciences, which advocates for a shift from a traditional sports-performance model to a

holistic educational approach based on physical literacy and inclusion (SISMeS, 2024). The new 2026 regulations specifically frame 'Giochi sportivi' (sports games) within cognitive, relational, and socio-emotional competencies, positioning ball games within a pedagogic discourse that must be legitimated through educational rather than purely sporting rationales (Colella, 2017; Cereda, 2023). Italian PETE programmes have increasingly incorporated game-based pedagogies and educational perspectives on sport. While recent scholarship has illuminated the complex epistemological and professional identity trajectories of Italian exercise science students (Cereda, 2025a), limited research has examined how beginning teachers recontextualise this knowledge in school settings or how their self-efficacy beliefs influence this process. This study addresses these gaps by investigating the recontextualization of ball games pedagogic discourse and SRL strategies among beginning PE teachers in Italy. Specifically, the research examines: (1) beginning teachers' self-efficacy for implementing SRL strategies in ball games contexts; (2) which elements of PETE pedagogic discourse regarding ball games and SRL are recontextualised in school practice; and (3) how evaluative rules and contextual factors regulate the reproduction of this pedagogic discourse. By integrating Bernstein's sociological framework of the pedagogic device with Bandura's socio-cognitive concept of self-efficacy, the study contributes theoretical and empirical insights into the complex processes through which PETE knowledge is transformed—or constrained—in professional practice.

Theoretical framework

This investigation draws upon two complementary theoretical perspectives: Bernstein's theory of the pedagogic device and Bandura's concept of self-efficacy. These frameworks are integrated to conceptualise teacher self-efficacy as an agentic mechanism in the recontextualization of pedagogic discourse from PETE to school PE.

Bernstein's pedagogic device and recontextualization

Bernstein's (2000) theory of the pedagogic device provides a sociological framework for understanding how knowledge is transformed into pedagogic communication across educational contexts. The pedagogic device operates through three interrelated sets of rules that regulate the production, recontextualization, and reproduction of discourse.

Distributive rules operate in the field of production, establishing boundaries for what constitutes legitimate knowledge. In relation to ball games, the field of production encompasses innovations in sport sciences, tactical theory, coaching methodologies, and educational research on game-based pedagogies. Distributive rules determine which forms of ball games knowledge are considered thinkable and valuable for educational transmission.

Recontextualising rules transform knowledge from the field of production into pedagogic discourse within the recontextualising field. This field comprises two subfields: the official recontextualising field (ORF), where state agencies construct curriculum policy, and the pedagogic recontextualising field (PRF), where teacher educators, textbook authors, and professional associations interpret and adapt official policy for pedagogic purposes (Singh, 2002). Pedagogic discourse is inherently hybrid, consisting of an instructional discourse (skills and competencies to be acquired) embedded within a regulative discourse (principles of social order, conduct, and identity) (Bernstein, 2000). The regulative discourse dominates, shaping what counts as legitimate knowledge and legitimate learner identity.

In Italian PETE, ball games pedagogic discourse is constructed primarily within the PRF, given the absence of specific curricular mandates. Teacher educators make selective decisions about which tactical models, game forms, and pedagogical approaches to include, and how to frame these within broader educational

goals. The recontextualization from sport science knowledge to PETE pedagogic discourse involves ideological positioning regarding the purposes of ball games in PE—whether oriented towards sporting performance, tactical understanding, inclusive participation, or social-emotional development.

Evaluative rules operate in the field of reproduction (schools), regulating pedagogic practice and assessment. These rules bring together the what (instructional discourse) and the how (regulative discourse) of teaching, defining the criteria by which legitimate pupil performance and teacher practice are recognised (Bernstein, 2000). Evaluative rules are shaped by institutional expectations, curricular requirements, assessment frameworks, and the material and social conditions of school contexts. For beginning teachers, evaluative rules exert powerful regulatory effects, often privileging established school practices over recently acquired PETE knowledge (Schempp et al., 1993).

Bernstein's framework illuminates how knowledge undergoes two transformative moments: first, in the movement from production to recontextualization (PETE), and second, in the movement from recontextualization to reproduction (school PE). Each transformation involves ideological selection, condensation, and adaptation. Beginning teachers act as recontextualising agents in the second transformation, negotiating between the pedagogic discourse encountered in PETE and the evaluative rules governing school practice.

Teacher self-efficacy as mediating mechanism

Bandura's (1997) social cognitive theory positions self-efficacy as a central construct influencing human agency and behaviour. Self-efficacy refers to individuals' beliefs in their capability to organise and execute courses of action required to produce given attainments. Unlike stable personality traits, self-efficacy beliefs are domain-specific, context-dependent, and malleable through experience (Bandura, 2006).

Teacher self-efficacy has demonstrated robust associations with instructional quality, persistence in the face of difficulties, and adoption of innovative practices (Tschannen-Moran & Woolfolk Hoy, 2001). Domain-specific measures of teacher self-efficacy provide greater predictive validity than generic instruments (Dellinger et al., 2008). The Teacher Self-Efficacy Scale to Implement Self-Regulated Learning (TSES-SRL), validated in Italy as the AI-AA scale (Scierri, 2024), assesses teachers' confidence in implementing both direct and indirect SRL strategies. The scale comprises four dimensions: self-efficacy for direct instruction of SRL strategies, self-efficacy for providing choices (indirect instruction), self-efficacy for providing challenges and complex tasks (indirect instruction), and self-efficacy for co-constructing assessment (indirect instruction).

In the context of recontextualization, self-efficacy beliefs function as mediating mechanisms that influence whether and how beginning teachers enact pedagogic discourse from PETE. Teachers with higher self-efficacy for implementing SRL strategies in ball games contexts may demonstrate greater persistence in using game-based pedagogies that require pupils to make tactical decisions, reflect on performance, and regulate their engagement. Conversely, teachers with lower self-efficacy may revert to more familiar technique-oriented approaches that minimise demands for pupil autonomy and metacognitive engagement.

Navigating structure and agency: Integrating the frameworks

This study integrates Bernstein's structural sociology with Bandura's social cognitivism to examine the dialectic between institutional regulation and individual agency. While originating from distinct ontological traditions—Bernstein emphasising the regulatory power of discursive rules and Bandura foregrounding the generative capability of the individual—their combination offers a dual lens on teacher socialisation. The

framework posits that recontextualization occurs within a space of tension rather than seamless alignment. Bernstein's evaluative rules define the boundaries of the 'thinkable' and 'legitimate' in school PE, creating structural constraints. Within these boundaries, self-efficacy operates as a proximal agentic resource and a context-sensitive interpretative filter. It determines whether teachers perceive these structural constraints as insurmountable barriers or navigable challenges.

Self-efficacy beliefs are thus conceptualised not merely as individual traits, but as structurally produced outcomes of differential access to the legitimate pedagogic discourse within the recontextualising field (PETE). Upon entering school contexts, beginning teachers encounter evaluative rules that may conflict with their PETE preparation. Material constraints (facilities, equipment), institutional expectations (assessment regimes), and pupil characteristics function as regulatory factors. In this context, self-efficacy regulates the extent to which PETE pedagogic discourse is sustained or transformed. High self-efficacy supports the negotiation of restrictive evaluative rules, fostering persistence in game-based approaches and SRL strategies. Conversely, low self-efficacy is associated with a reversion to traditional approaches when the reproductive field imposes conflicting demands. This recursive relationship positions self-efficacy as both a product of initial recontextualization and a driver of subsequent pedagogic reproduction.

METHODS

Research design

The study employed a sequential explanatory mixed-methods design (Creswell & Plano Clark, 2018), consisting of an initial quantitative phase followed by a qualitative phase designed to explain and elaborate quantitative findings. The quantitative phase examined the distribution of self-efficacy beliefs for implementing SRL strategies among beginning PE teachers and explored relationships between self-efficacy dimensions and background variables. The qualitative phase investigated how beginning teachers recontextualise ball games pedagogic discourse from PETE to school practice, and how self-efficacy beliefs intersect with evaluative rules and contextual factors in shaping pedagogic practice.

Participants

Participants were 287 beginning PE teachers (172 female, 115 male) currently employed in Italian state schools. Inclusion criteria required participants to: (1) hold a teaching qualification in PE (laurea magistrale in scienze motorie or equivalent); (2) have graduated within the previous five years (2019–2024); and (3) have between one and four years of PE teaching experience. Participants were recruited using convenience sampling through professional associations, social media networks, and direct contact with schools across 12 Italian regions. Due to the open nature of the recruitment, an exact response rate could not be calculated. It is acknowledged that this strategy limits representativeness and may introduce self-selection bias, as teachers with a pre-existing interest in SRL or innovative pedagogies might have been more likely to participate. Despite these limitations, the sample represented diverse geographical contexts (Northern regions: 45%; Central regions: 33%; Southern regions and islands: 22%) and school levels (lower secondary: 58%; upper secondary: 42%). Mean age was 28.7 years (SD = 3.2), and mean teaching experience was 2.1 years (SD = 0.9). Demographic characteristics are summarised in Table 1.

Following quantitative data analysis, purposeful sampling (Patton, 2015) was employed to select 18 participants for semi-structured interviews. Sampling criteria ensured diversity in self-efficacy profiles (high, moderate, low across AI-AA dimensions), PETE institution attended (six institutions represented), geographical region, school level, and gender (9 female, 9 male). Recruitment continued until data saturation was reached, defined as the point where no new themes or dimensions emerged (Saunders et al., 2018).

Furthermore, negative case analysis was actively pursued by specifically inviting teachers with low self-efficacy scores (n = 6). However, consistent with avoidance behaviours often associated with low self-efficacy, only three of these teachers agreed to participate, ensuring that disconfirming evidence regarding the recontextualization process was represented. Selected participants had graduated from PETE programmes between 2020 and 2023 and possessed 1–3 years of teaching experience. Most participants (n = 16) had received instruction in game-based approaches during PETE; two participants (Francesca and Roberto) reported traditional technique-focused preparation, as confirmed through institutional curriculum documents (see Table 2.)

Table 1. Demographic characteristics of participants in quantitative phase (N = 287).

Characteristic	Category	n	%
Gender	Female	172	59.9
	Male	115	40.1
Age (years)	24–26	89	31.0
	27–29	121	42.2
	30–35	77	26.8
	M (SD)	28.7 (3.2)	
Teaching experience (years)	1	78	27.2
	2	102	35.5
	3	71	24.7
	4	36	12.5
	M (SD)	2.1 (0.9)	
Geographical region	Northern Italy	129	44.9
	Central Italy	95	33.1
	Southern Italy and islands	63	22.0
School level	Lower secondary (grades 6–8)	166	57.8
	Upper secondary (grades 9–13)	121	42.2
Contract type	Permanent position	118	41.1
	Fixed-term contract	169	58.9
PETE institution type	Traditional university programme	198	69.0
	Post-graduate qualification pathway	89	31.0
GBA instruction in PETE	Yes	214	74.6
	No	73	25.4

Note. GBA = Game-based approaches (including TGfU, TGM, or similar pedagogical models). PETE = Physical education teacher education.

Instruments and data collection

The *quantitative instrument* AI-AA scale (Scierri, 2024) was administered via online survey. The validated Italian instrument comprises 17 items distributed across four dimensions: Direct Instruction of SRL Strategies (6 items; e.g., "*Insegnare ai suoi studenti come usare e applicare le diverse strategie di apprendimento autoregolato*" [Teach your students how to use and apply different self-regulated learning strategies]); Providing Choices (4 items; e.g., "*Scegliere insieme ai suoi studenti quando svolgere determinate attività di apprendimento*" [Choose together with your students when to carry out certain learning activities]); Providing Challenges and Complex Tasks (4 items; e.g., "*Dare esercizi impegnativi che possono essere svolti in modi diversi e non prestabiliti*" [Give challenging exercises that can be carried out in different and not predetermined ways]); and Co-constructing Assessment (3 items; e.g., "*Coinvolgere i suoi studenti nella preparazione dei criteri di valutazione dei compiti*" [Involve your students in preparing task assessment criteria]). Responses were recorded on a six-point Likert scale ranging from 1 (per niente in grado [not at all capable]) to 6 (del tutto in grado [completely capable]).

For this study, an additional contextualising prompt was included: "*Consider specifically your teaching of ball games (e.g., invasion games such as basketball, handball, football; net/wall games such as volleyball;*

striking/fielding games) when responding to the following items." This modification ensured that self-efficacy assessments were anchored to ball games contexts rather than general PE instruction.

Table 2. Characteristics of interview participants (n = 18)

Pseudonym	Gender	Age	Years teaching	School level	Region	PETE institution	AI-AA profile	Sporting biography
Alessia	F	26	2	Lower sec.	Central	University A	Moderate-high	Volleyball, swimming
Marco	M	29	3	Upper sec.	Northern	University B	High	Basketball, athletics
Giulia	F	27	2	Lower sec.	Southern	University C	Moderate	Volleyball club player
Davide	M	30	3	Upper sec.	Northern	University B	High	Football, tennis
Elena	F	28	2	Lower sec.	Central	University D	Moderate-high	Rhythmic gymnastics
Simone	M	29	2	Lower sec.	Northern	University A	Moderate-high	Handball, swimming
Francesca	F	25	1	Lower sec.	Southern	University E	Low-moderate	Dance, fitness activities
Luca	M	31	3	Upper sec.	Central	University F	High	Football coach, athletics
Chiara	F	27	2	Lower sec.	Central	University A	Moderate	Basketball, skiing
Andrea	M	30	3	Upper sec.	Northern	University B	High	Volleyball, football
Matteo	M	26	2	Lower sec.	Southern	University C	Moderate	Football, martial arts
Sofia	F	28	2	Upper sec.	Central	University D	Moderate	Tennis, fitness
Roberto	M	27	2	Lower sec.	Southern	University E	Low-moderate	Football, basketball
Valentina	F	29	2	Lower sec.	Central	University A	Moderate	Volleyball, swimming
Federica	F	25	1	Lower sec.	Northern	University F	Low-moderate	Dance, gymnastics
Giuseppe	M	32	3	Upper sec.	Southern	University C	Moderate-high	Football, handball
Laura	F	28	2	Upper sec.	Northern	University B	High	Basketball coach
Paolo	M	29	3	Upper sec.	Central	University D	Moderate-high	Athletics, swimming

Note. F = Female; M = Male; sec. = secondary. AI-AA profile categories based on total scale scores: Low-moderate (M = 2.50–3.49); Moderate (M = 3.50–4.19); Moderate-high (M = 4.20–4.79); High (M ≥ 4.80). PETE institutions anonymised (A–F represent six different Italian universities offering physical education teacher education programmes). All participants had received instruction in game-based approaches during PETE except Francesca and Roberto.

For *qualitative data collection* semi-structured interviews were conducted between October 2024 and February 2025 via secure video conferencing platform. The interview protocol, adapted from Mustell's (2024) framework, included questions addressing: participants' sporting biographies and motivations for PE teaching; experiences of ball games pedagogy within PETE (content, pedagogical approaches, practicum experiences); current ball games teaching practices (content selection, instructional strategies, use of SRL approaches); perceived usefulness and relevance of PETE preparation; challenges encountered in implementing ball games and SRL strategies; and perceptions of contextual factors influencing practice.

Interviews lasted 42–68 minutes (mean = 54 minutes) and were audio-recorded with informed consent. While a specific Confirmatory Factor Analysis (CFA) for the ball games context was not conducted, the internal consistency reliability coefficients (Cronbach's α) for this administration were high (0.81–0.89), suggesting that construct stability was maintained under the contextualised conditions.

Data analysis

Quantitative data were analysed using SPSS 28.0. Descriptive statistics (means, standard deviations) were calculated for each AI-AA dimension and the total scale. Internal consistency reliability was assessed using Cronbach's alpha. Correlations between AI-AA dimensions and between AI-AA scores and background variables (teaching experience, PETE institution type, school level) were examined using Pearson correlation coefficients. To examine the predictive contribution of PETE preparation, hierarchical multiple regression analysis was performed on the total AI-AA score, controlling for teaching experience and gender. Independent samples t-tests compared self-efficacy scores across categorical variables (gender, geographical region). Statistical significance was set at $p < .05$.

For qualitative analysis, interview recordings were transcribed verbatim, yielding 412 pages of transcript data. Data were imported into NVivo 12 (QSR International) to facilitate data management and coding organization. Thematic analysis following Braun and Clarke's (2021) reflexive approach was conducted. To enhance rigour and trustworthiness, the research team engaged in reflexive journaling throughout the process, documenting analytic decisions and personal assumptions stemming from their backgrounds as teacher educators. While the initial coding was inductive, subsequent theme development was guided by theoretical questioning derived from Bernstein's framework: Which elements of instructional and regulative discourse from PETE are reproduced? How are these transformed in response to evaluative rules? Which institutional and material conditions regulate practice? Analytic disagreements were resolved through deliberative dialogue rather than consensus-seeking, preserving interpretive nuance. An audit trail of coding decisions and theme evolution was maintained. Preliminary themes were reviewed against coded extracts and entire transcripts to ensure coherence. Participant quotations were translated into English, preserving semantic and pragmatic meaning.

Ethical considerations

The study received approval from the University Territorial Ethics Committee (UTEC 2024-67). All participants provided written informed consent prior to data collection, with confidentiality assured through pseudonymisation. Participants were informed of their right to withdraw at any stage without consequence.

RESULTS

Predictors of self-efficacy

Hierarchical regression analysis was conducted to determine the variance in total self-efficacy explained by GBA exposure after controlling for background variables. In Step 1, gender and teaching experience explained a small but significant proportion of variance ($R^2 = .05$, $p < .05$), with experience emerging as a positive predictor ($\beta = .19$, $p = .003$). In Step 2, explicit instruction in Game-Based Approaches (GBA) during PETE was added. This model explained significantly more variance ($R^2 = .18$, $\Delta R^2 = .13$, $p < .001$). GBA exposure was a significant positive predictor ($\beta = .37$, $p < .001$), indicating that specific pedagogical preparation in PETE is a stronger predictor of self-efficacy for SRL in ball games than teaching experience alone. No significant interaction effects were found between experience and GBA exposure.

Quantitative findings

Table 3 presents descriptive statistics for the AI-AA scale dimensions. Overall, beginning teachers reported moderate levels of self-efficacy for implementing SRL strategies in ball games contexts (total scale *M* = 3.82, *SD* = 0.71). Across dimensions, self-efficacy for providing challenges and complex tasks was highest (*M* = 4.21, *SD* = 0.68), followed by providing choices (*M* = 3.94, *SD* = 0.79) and co-constructing assessment (*M* = 3.61, *SD* = 0.88). Self-efficacy for direct instruction of SRL strategies was lowest (*M* = 3.52, *SD* = 0.83). Internal consistency reliability was acceptable to excellent across all dimensions (Cronbach's *α* ranging from 0.81 to 0.89) and for the total scale (*α* = 0.91).

Table 3. Descriptive statistics and internal consistency reliability for AI-AA scale dimensions (N = 287)

AI-AA Dimension	No. of items	M	SD	Range	Skewness	Kurtosis	Cronbach's α
Direct Instruction of SRL Strategies (ID)	6	3.52	0.83	1.00–6.00	−0.28	−0.41	0.89
Providing Choices (II-S)	4	3.94	0.79	1.25–6.00	−0.35	−0.18	0.84
Providing Challenges and Complex Tasks (II-SC)	4	4.21	0.68	2.00–6.00	−0.47	0.22	0.86
Co-constructing Assessment (II-V)	3	3.61	0.88	1.00–6.00	−0.19	−0.52	0.81
Total AI-AA Scale	**17**	**3.82**	**0.71**	**1.71–5.88**	**−0.31**	**−0.15**	**0.91**

Note. AI-AA = Autoefficacia dell'Insegnante per l'implementazione dell'Apprendimento Autoregolato (Teacher Self-Efficacy Scale to Implement Self-Regulated Learning). SRL = Self-regulated learning. Responses were recorded on a six-point Likert scale: 1 (per niente in grado [not at all capable]) to 6 (del tutto in grado [completely capable]). All skewness and kurtosis values fall within acceptable ranges for normal distribution (|skewness| < 2.0; |kurtosis| < 7.0).

As shown in Table 4, all four AI-AA dimensions demonstrated significant positive intercorrelations (*r* = 0.59–0.74, *p* < .001), indicating coherent but distinguishable facets of SRL implementation self-efficacy. Teaching experience (years) correlated weakly but significantly with Direct Instruction (*r* = 0.19, *p* = .002) and Co-constructing Assessment (*r* = 0.16, *p* = .007), suggesting modest increases in these efficacy beliefs over the initial years of practice. No significant correlations emerged between AI-AA dimensions and school level or geographical region.

Table 4. Intercorrelations Among AI-AA Dimensions and Correlations with Teaching Experience (N = 287)

Variable	1	2	3	4	5
1. Direct Instruction (ID)	—				
2. Providing Choices (II-S)	.68***	—			
3. Providing Challenges (II-SC)	.61***	.72***	—		
4. Co-constructing Assessment (II-V)	.59***	.74***	.66***	—	
5. Total AI-AA	.84***	.90***	.85***	.86***	—
6. Teaching experience (years)	.19**	.11	.08	.16**	.14*

*Note. AI-AA = Autoefficacia dell'Insegnante per l'implementazione dell'Apprendimento Autoregolato. *p < .05. **p < .01. ***p < .001 (two-tailed).*

Table 5. Comparison of AI-AA dimension scores by exposure to game-based approaches in PETE.

AI-AA Dimension	GBA instruction (*n* = 214)	No GBA instruction (*n* = 73)	*t*	*df*	*p*	Cohen's *d*
	M (SD)	*M (SD)*				
Direct Instruction (ID)	3.57 (0.81)	3.42 (0.87)	1.48	285	.140	0.18
Providing Choices (II-S)	4.08 (0.74)	3.64 (0.82)	4.32	285	<.001	0.56
Providing Challenges (II-SC)	4.32 (0.63)	3.97 (0.74)	3.89	285	<.001	0.51
Co-constructing Assessment (II-V)	3.75 (0.84)	3.32 (0.94)	3.71	285	<.001	0.48
Total AI-AA	3.93 (0.67)	3.59 (0.76)	3.79	285	<.001	0.48

Note. AI-AA = Autoefficacia dell'Insegnante per l'implementazione dell'Apprendimento Autoregolato. GBA = Game-based approaches (TGfU, TGM, or similar pedagogical models) during physical education teacher education (PETE). Independent samples t-tests with equal variances assumed (Levene's test p > .05 for all comparisons). Cohen's d values: 0.20 = small effect, 0.50 = medium effect, 0.80 = large effect.

Independent samples t-tests (Table 5) revealed no significant gender differences across AI-AA dimensions. However, teachers who reported having received explicit instruction in game-based approaches (TGfU, TGM, or similar models) during PETE (n = 214) demonstrated significantly higher self-efficacy for Providing Choices (M = 4.08, SD = 0.74) compared to those without such instruction (n = 73; M = 3.64, SD = 0.82; $t(285) = 4.32$, $p < .001$, $d = 0.56$). This pattern was also evident for providing challenges (M = 4.32 vs. M = 3.97; $t(285) = 3.89$, $p < .001$, $d = 0.51$) and co-constructing assessment (M = 3.75 vs. M = 3.32; $t(285) = 3.71$, $p < .001$, $d = 0.48$), but not for direct instruction ($p = .14$).

Qualitative findings

Qualitative analysis identified three primary themes representing recontextualised elements of pedagogic discourse, alongside two themes illuminating constraints on recontextualization. These are presented below.

Theme 1: fostering pupil autonomy through modified game forms

A central element of pedagogic discourse from PETE that beginning teachers sought to recontextualise involved using modified games to foster pupil autonomy in tactical decision-making and strategic thinking. This element reflects both instructional discourse (tactical understanding as content) and regulative discourse (pupils as active, autonomous learners). Nearly all participants described exposure to game-based approaches during PETE and articulated their educational value:

> *During university, we learned about Teaching Games for Understanding and the Tactical Games Model. The philosophy is that you don't just teach techniques in isolation—you put students into game situations where they have to make decisions and solve tactical problems. This prepares them to be intelligent players, not just robots who can execute skills. (Alessia, 2 years' experience, Central Italy).*

> *The idea from university was that games should be adapted to the learners' level, not the other way around. You modify rules, space, equipment, so everyone can participate and learn tactical concepts. For example, in basketball you might use smaller courts, allow more dribbles, or require a minimum number of passes before shooting. This makes the game more inclusive and focuses on understanding, not just skill. (Marco, 3 years' experience, Northern Italy)*

However, participants' descriptions of actual practice revealed a complex negotiation rather than simple reproduction, characterised by selective and partial implementation of game-based pedagogies. Most teachers reported using modified games occasionally, particularly for unfamiliar sports where pupils lacked established expectations. Modified games for popular sports (football, volleyball) were described as more challenging to implement:

> *With volleyball, I try to use smaller courts and lighter balls, sometimes allowing one bounce. But many students, especially the boys who play in clubs, resist these modifications. They say, 'this isn't real volleyball.' They want to play six-on-six with normal rules. It's frustrating because I know the modifications help the beginners, but I also need to keep the experienced players engaged. (Giulia, 2 years' experience, Southern Italy)*

The recontextualization of game-based pedagogies thus involved negotiation between PETE discourse emphasising inclusive, educative game forms and evaluative rules shaped by pupils' sporting expectations and competitive orientations. Consistent with the quantitative profile of high efficacy (AI-AA > 4.20), teachers like Davide described greater persistence in implementing modified games despite resistance:

> *I'm confident now in adapting games to different levels. At first I was worried about managing the class if I changed too many rules, but I've learned that if you explain the learning purpose clearly and*

give students some choices—like choosing positions or deciding how to score—they accept the modifications better. My professor at university said, 'never apologise for modifying the game; explain why it serves learning,' and that advice has really helped me. (Davide, 3 years' experience, Northern Italy)

Theme 2: adapting ball games to heterogeneous groups

A second recontextualised element concerned inclusive pedagogy oriented towards heterogeneous pupil populations. This element was universally present in participants' accounts of PETE pedagogic discourse and strongly aligned with Italian curricular emphasis on personalised learning and inclusion. The regulative discourse here positioned all pupils as legitimate learners regardless of prior sporting experience:

In university, we constantly discussed how to include everyone in ball games. Not just students with disabilities, but also those who are shy, who have negative experiences from sports clubs, who come from families that don't value sport. We learned strategies like small-sided games, cooperative rules, rotating positions, assessment based on improvement not absolute performance. (Elena, 2 years' experience, Central Italy)

In school practice, participants described heterogeneity as simultaneously a core teaching value and a major practical challenge. Strategies for adaptation included differentiating task complexity, forming flexible groupings, and selecting fewer familiar sports:

I have classes where some students play in elite youth academies and others have never touched a basketball. Traditional drills don't work—the advanced students are bored and the beginners are lost. So I use games with multiple objectives. For example, in handball I might have different scoring zones worth different points and require teams to use certain tactical movements. Advanced students focus on complex tactics; beginners focus on basic positioning and passing. Everyone participates, but at their level. (Simone, 2 years' experience, Northern Italy)

However, several participants with lower self-efficacy for Providing Challenges expressed difficulty sustaining differentiated instruction:

I know I should adapt activities to different levels, but honestly it's exhausting. You plan three different versions of the same game, and it still doesn't work because the groups are so diverse. Sometimes I just let them play and circulate to give individual feedback. I know this isn't ideal, but I don't have enough confidence yet to manage truly differentiated lessons. (Francesca, 1 year experience, Southern Italy)

This theme illustrates how recontextualization of inclusive pedagogic discourse was mediated by self-efficacy, particularly confidence in designing and managing complex, differentiated tasks.

Theme 3: Connecting tactical learning to curricular goals

The third recontextualised element involved framing ball games instruction around curricular competencies rather than sport-specific performance outcomes. This element reflects transformation in the regulative discourse, positioning ball games as means to broader educational ends rather than intrinsically valuable content:

The most important thing I learned at university was that ball games in school are not about training athletes. They are about developing competencies: motor competence, yes, but also strategic thinking, cooperation, emotional regulation. So when I teach football, the goal is not to produce good football players but to use football to develop these broader competencies. This completely changed how I think about assessment—I'm not assessing how well they kick but how they solve tactical

> *problems, how they cooperate, whether they can reflect on their learning. (Luca, 3 years' experience, Central Italy)*

Most participants described this curricular orientation as central to their pedagogic identity, distinguishing them from sport coaches. However, translating this orientation into coherent assessment practices proved challenging:

> *I believe in assessing learning, not just performance, but I struggle with how to do this practically. The curriculum says to assess problem-solving and strategic thinking, but when you have 25 students playing a game, how do you assess that systematically? I observe and take notes, but it feels subjective. I wish university had given us more concrete assessment tools. (Chiara, 2 years' experience, Central Italy)*

Reinforcing the quantitative link between specific efficacy beliefs and practice, teachers with higher self-efficacy for Co-constructing Assessment (e.g., Andrea, high efficacy profile) more frequently described involving pupils in defining success criteria and self-assessment:

> *After we play a tactical game, I have students discuss what tactical principles they used—like creating space or supporting the ball carrier—and we develop criteria together for what successful application looks like. Then in the next lesson they assess themselves and peers against those criteria. This makes the learning visible and helps them regulate their own progress. (Andrea, 3 years' experience, Northern Italy)*

This practice reflects sophisticated recontextualization of both game-based pedagogies (focusing on tactical concepts) and SRL strategies (involving pupils in assessment), yet it was described by a minority of participants with high domain-specific self-efficacy.

Theme 4: Absence of explicit SRL instruction in ball games

Despite moderate self-efficacy scores for Direct Instruction of SRL strategies, qualitative data revealed minimal explicit teaching of SRL strategies within ball games contexts. When probed about teaching pupils how to plan tactical approaches, monitor their decision-making, or reflect on performance, most participants acknowledged this occurred only implicitly:

> *I encourage students to think tactically and sometimes I ask questions like 'why did you choose to pass instead of shoot?' but I don't explicitly teach them metacognitive strategies. Like, I don't teach them how to set goals for a game or how to evaluate their tactical decisions systematically. Maybe I should, but I don't really know how to do that in a ball games context. (Matteo, 2 years' experience, Southern Italy)*

Several participants indicated that SRL strategies were addressed in other PE content areas (e.g., fitness, gymnastics) but not systematically integrated into ball games units:

> *We did learn about self-regulated learning in university, but mainly in theoretical courses, not specifically applied to ball games. I use SRL strategies when I teach health and fitness topics—students set goals, plan workout programmes, self-monitor. But in ball games I focus more on tactical concepts and teamwork. I hadn't really thought about connecting them until this interview. (Sofia, 2 years' experience, Central Italy)*

This finding suggests incomplete recontextualization of SRL pedagogic discourse into ball games practice, despite its presence in PETE curriculum. Lower self-efficacy for Direct Instruction may partly explain this gap, alongside insufficient modelling of SRL integration within game-based pedagogies during PETE.

Theme 5: evaluative rules and material constraints regulating practice

Participants consistently identified contextual factors that constrained recontextualization of PETE pedagogic discourse. These factors functioned as evaluative rules shaping what pedagogic practices were feasible and legitimate.

Facilities and equipment. Material conditions directly regulated pedagogic possibilities. Many schools lacked adequate indoor facilities, forcing outdoor instruction in adverse weather or shared use of multipurpose spaces. Limited equipment (e.g., insufficient balls for small-sided games) prevented implementation of pedagogies requiring simultaneous active participation:

> *My university had excellent facilities—multiple gymnasiums, abundant equipment. When I started teaching, I discovered my school has one small gym shared with three other teachers, and we have twelve basketballs for classes of 25 students. The game-based approaches I learned require small-sided games with everyone actively involved, but I physically cannot do that. So I fall back on drills where students take turns. (Roberto, low efficacy profile, 2 years' experience, Southern Italy)*

Institutional assessment requirements. While Italian PE assessment formally emphasises competency development, participants described institutional pressures towards quantifiable performance outcomes:

> *The school wants me to give numeric grades based on clear criteria. I can't just write 'this student demonstrates good tactical understanding.' So I end up assessing technical skills because they're easier to measure—how many successful passes, shooting accuracy, things like that. This contradicts what I learned about assessing strategic thinking, but I need defensible grades. (Valentina, 2 years' experience, Central Italy)*

Pupil expectations and resistance. As noted earlier, pupils' prior sporting experiences generated expectations that sometimes conflicted with educational approaches:

> *Many students, especially those in sports clubs, view PE as a chance to play competitively, not to work on tactics or self-regulation. They get frustrated when I stop the game for reflection or when I modify rules for learning purposes. Some boys say, 'coach doesn't do it this way in the club, why are we doing it differently here?' Managing these expectations is draining. (Federica, 1 year experience, Northern Italy)*

Table 6. Integration of quantitative profiles and qualitative themes: a joint display of recontextualization patterns.

AI-AA profile	Quantitative characteristic (mean range)	Dominant recontextualization strategy (qualitative theme)	Key pedagogic action	Typical quote (participant)
High Efficacy	Total Score > 4.20	Negotiated Enactment (Theme 1 & 3)	Persists with modified games; explains rationale to resistant pupils; uses formative assessment.	*"I explain why it serves learning... and that advice has really helped me."* (Davide)
Moderate Efficacy	Total Score 3.50–4.19	Selective Reproduction (Theme 2)	Uses game modifications only when convenient; struggles with differentiation in heterogeneous groups.	*"I try to use smaller courts... but many students resist."* (Giulia)
Low Efficacy	Total Score < 3.50	Strategic Retreat (Theme 5)	Abandons innovative practices in face of constraints; reverts to drills/traditional instruction.	*"I physically cannot do that. So I fall back on drills."* (Roberto)

Note. This joint display illustrates how domain-specific self-efficacy functions as an interpretive filter regulating the recontextualization of PETE discourse.

These evaluative rules and contextual constraints illuminated the reproductive field's regulatory power over pedagogic practice, often overriding the innovative pedagogic discourse encountered in PETE. To synthesise these findings, Table 6 provides a joint display integrating the quantitative self-efficacy profiles with the qualitative recontextualization patterns identified.

DISCUSSION

This study examined how beginning PE teachers in Italy recontextualise ball games pedagogic discourse and SRL strategies in the transition from PETE to school practice, and how self-efficacy beliefs intersect with this process. The integration of Bernstein's sociological framework with Bandura's concept of self-efficacy provided theoretical leverage for understanding recontextualization as a negotiated act shaped by both structural-institutional forces and individual agentic resources.

Self-efficacy profiles and their pedagogical significance

Quantitative findings revealed moderate levels of self-efficacy for implementing SRL strategies in ball games, with notable variation across dimensions. Self-efficacy for Direct Instruction was lowest, consistent with qualitative evidence that explicit SRL teaching remained largely absent from ball games practice. This pattern suggests incomplete recontextualization of SRL pedagogic discourse from PETE to the reproduction field. While PETE programmes may introduce SRL theoretical frameworks and generic strategies, recent analyses of Italian kinesiology curricula reveal significant fragmentation and a predominant biomedical bias that often marginalises pedagogical training (Cereda, 2025b). This structural imbalance results in insufficient contextualisation within ball games teaching and appears to limit beginning teachers' confidence and competence in this domain. This finding resonates with broader research indicating that SRL implementation in PE contexts remains limited (Dignath-van Ewijk, 2013; Kistner et al., 2010) and extends this understanding by identifying domain-specific self-efficacy as a contributing mechanism.

Conversely, higher self-efficacy for Providing Challenges and Complex Tasks aligns with widespread exposure to game-based approaches during PETE. Italian PETE programmes have increasingly incorporated TGfU, TGM, and related models (Valentini & Rudisill, 2004), and participants in this study generally received instruction in these pedagogies. The significant association between explicit PETE instruction in game-based approaches and self-efficacy for indirect SRL strategies (Providing Choices, Providing Challenges, Co-constructing Assessment) suggests that modelling these pedagogies within PETE contributes to efficacy development. This finding supports recent advocacy for instructional alignment in PETE, wherein pre-service teachers experience pedagogical approaches they are expected to subsequently implement (MacPhail et al., 2023).

However, the correlation between teaching experience and self-efficacy dimensions was modest, indicating that experience alone does not substantially enhance efficacy beliefs during the initial years of practice. This suggests that efficacy development requires more than accumulated time; structured professional development, mentoring, and opportunities for reflective practice may be necessary to strengthen efficacy through mastery experiences and social persuasion (Bandura, 1997).

Recontextualised elements and selective reproduction

Qualitative analysis identified three elements of PETE pedagogic discourse that beginning teachers sought to recontextualise: fostering pupil autonomy through modified games, adapting ball games to heterogeneous groups, and connecting tactical learning to curricular goals. These elements reflect both instructional discourse (tactical understanding, motor competence) and regulative discourse (pupils as autonomous,

capable learners deserving inclusive pedagogy). Their prominence in participants' accounts suggests that Italian PETE graduates internalise educational perspectives on ball games that distinguish PE from sport club contexts (Larsson & Karlefors, 2015; Lundvall & Meckbach, 2008). This represents a significant achievement given persistent concerns about sportisation of PE and the powerful influence of teachers' sporting biographies (Dowling, 2011; Mordal-Moen & Green, 2014).

However, recontextualization involved selective and partial reproduction rather than faithful enactment. Participants frequently described tensions between educational ideals and practical realities, resulting in hybrid pedagogies that combined elements of game-based approaches with more traditional practices. This hybridity aligns with findings from previous research on GBA implementation and recent scholarship within the Italian context (Cereda, 2023), which documents teachers' tendency to blend constructivist and behaviourist approaches (Díaz-Cueto et al., 2010; O'Leary, 2014). From a Bernsteinian perspective, this hybridity reflects the ideological work inherent in recontextualization: beginning teachers must reconcile competing principles (educational vs. sporting, inclusive vs. performance-oriented, learner-centred vs. teacher-directed) within specific institutional contexts.

Self-efficacy functioned as an agentic mechanism in this process. Teachers with higher self-efficacy for Providing Choices and Providing Challenges demonstrated greater persistence in implementing modified games despite pupil resistance and institutional pressures. They described confidence in explaining pedagogical rationales, negotiating with pupils, and adapting approaches based on contextual feedback. Conversely, teachers with lower self-efficacy more readily abandoned innovative practices when confronted with challenges, reverting to familiar drill-based or play-focused formats. This pattern illustrates how self-efficacy is intertwined with the agentic dimension of recontextualization: while structural constraints impose real limits, self-efficacy beliefs appear to moderate whether teachers perceive these constraints as surmountable obstacles or insurmountable barriers.

Evaluative rules and the regulation of pedagogic practice

Bernstein's concept of evaluative rules proved analytically productive in understanding how contextual factors regulate the reproduction of pedagogic discourse. Material conditions (facilities, equipment), institutional assessment regimes, and pupil expectations functioned as evaluative rules that defined legitimate pedagogic practice within the reproduction field. These rules frequently contradicted the pedagogic discourse promoted in PETE, creating disjunctures that beginning teachers struggled to navigate.

Material constraints represented the most concrete form of regulation. Inadequate facilities and insufficient equipment directly limited the enactment of small-sided game formats central to game-based pedagogies. This finding corroborates previous research identifying material conditions as significant barriers to innovative PE practice (MacPhail et al., 2008) and extends this by demonstrating how such conditions function as evaluative rules that determine what pedagogic practices are thinkable and achievable. From a Bernsteinian perspective, these material conditions are not neutral obstacles but rather embody institutional priorities and resource allocation decisions that regulate which forms of PE are valued and supported.

Institutional assessment requirements constituted a second evaluative force. Despite Italian curricular rhetoric emphasising competency-based assessment, participants described pressures towards quantifiable performance metrics. This tension reflects broader contradictions within educational policy between progressive pedagogical ideals and accountability mechanisms privileging measurable outcomes (Evans, 2014). Teachers with higher self-efficacy for Co-constructing Assessment partially resisted these pressures by involving pupils in defining success criteria and using qualitative self-assessment, thereby maintaining

alignment with PETE pedagogic discourse. However, such practices remained exceptional rather than normative.

Pupil expectations and resistance represented a third regulatory force, one insufficiently addressed in PETE preparation. Participants frequently described surprise at the intensity of pupils' sporting identities and competitive orientations, which contradicted assumptions about learner receptivity to educational game forms. This finding echoes Mustell's (2024) identification of pupil expectations as a significant contextual factor regulating ball games pedagogy. The regulatory power of pupil expectations illuminates how social subjects within the reproduction field actively shape pedagogic discourse, rather than passively receiving transmitted knowledge. Beginning teachers with robust self-efficacy demonstrated greater capacity to negotiate these expectations through pedagogical persuasion, but many felt underprepared for this aspect of practice.

Implications for PETE and professional development

Findings suggest several implications for enhancing the impact of PETE and supporting beginning teachers' professional development, particularly within the broader goal of fostering physical literacy (Cereda, in press). First, PETE curricula should provide explicit instruction in integrating SRL strategies within ball games teaching. Rather than addressing SRL as generic content separate from subject matter, PETE should model how tactical game-based pedagogies can incorporate SRL principles such as goal-setting for tactical improvement, peer assessment of strategic decisions, and metacognitive reflection on game performance. This recommendation aligns with calls for instructional alignment in PETE (MacPhail et al., 2023) and addresses the identified gap in beginning teachers' self-efficacy for Direct Instruction of SRL strategies.

Second, PETE should prepare pre-service teachers more effectively for the evaluative rules and material constraints they will encounter in schools. While PETE programmes cannot replicate all school contexts, they can: (1) incorporate authentic school-based scenarios into coursework, requiring pre-service teachers to plan ball games units with realistic constraints; (2) foster critical analysis of institutional forces that shape pedagogic practice; and (3) develop adaptive expertise in modifying game-based pedagogies for varied contexts. School placement experiences should be strategically designed to expose pre-service teachers to diverse material conditions and institutional cultures, with structured reflection on how these contexts enable or constrain innovative practice.

Third, pre-service teachers would benefit from explicit preparation in managing pupil resistance and negotiating expectations. This involves developing communication skills for explaining pedagogical rationales, strategies for building legitimacy for modified game forms, and resilience when innovative practices meet initial resistance. Role-play activities, case study discussions, and mentoring from experienced teachers who successfully implement game-based approaches could support this development.

Fourth, findings underscore the importance of ongoing professional development for beginning teachers. The modest correlation between teaching experience and self-efficacy suggests that experience alone is insufficient for efficacy enhancement. Structured induction programmes, collaborative learning communities focused on ball games pedagogy, and opportunities to observe and discuss innovative practices with peers could provide the mastery experiences, vicarious learning, and social persuasion necessary for strengthening self-efficacy (Bandura, 1997). Such support structures would help beginning teachers sustain the pedagogic discourse acquired in PETE rather than abandoning it under institutional pressures.

Theoretical contributions

This study advances the international debate on teacher socialisation by moving beyond the binary of 'washing out' versus 'impact'. By integrating Bernstein's sociological framework with Bandura's concept of self-efficacy, the research illuminates recontextualization as a negotiated act rather than a passive transmission or inevitable failure. While Bernstein's framework maps the structural determinants (evaluative rules) that regulate pedagogic discourse, Bandura's construct explains the variation in individual response. Crucially, the study identifies domain-specific self-efficacy not merely as a trait, but as a context-sensitive filter that regulates the 'gap' between PETE ideals and school realities. Bernstein's framework explains how institutional forces, material conditions, and evaluative rules regulate the reproduction of pedagogic discourse, while Bandura's concept of self-efficacy explains variation in individual teachers' responses to these structural constraints. Self-efficacy thus operates as an agentic mechanism linking structural contexts to individual practice.

Methodologically, the study illustrates the value of mixed-methods approaches in educational research. Quantitative data established the distribution and correlates of self-efficacy beliefs across a substantial sample, while qualitative data provided rich accounts of how self-efficacy intersects with recontextualization processes in specific contexts. The explanatory sequential design enabled qualitative findings to illuminate patterns identified quantitatively, enhancing interpretive depth.

Limitations and future research

Several limitations warrant acknowledgement. First, the study relied on self-reported data for both quantitative (self-efficacy) and qualitative (descriptions of practice) components. Observational research examining actual pedagogic practices would provide complementary evidence and potentially reveal discrepancies between reported and enacted practices. Second, the cross-sectional design precludes causal inferences regarding relationships between self-efficacy and pedagogic practice. Longitudinal research tracking beginning teachers across multiple years could illuminate trajectories of efficacy development and identify critical periods for intervention. Third, while the study examined beginning teachers' perspectives on PETE preparation, it did not directly investigate PETE curricula or pedagogies. Comparative research examining recontextualization processes across different PETE institutions with varied curricular approaches would enhance understanding of how PETE design influences beginning teacher practice.

Future research should investigate interventions designed to strengthen beginning teachers' self-efficacy for implementing SRL strategies in ball games contexts. Experimental or quasi-experimental designs comparing induction programmes incorporating targeted professional development with standard induction could provide evidence for effective support structures. Additionally, research examining pupils' experiences of SRL-oriented ball games pedagogy would illuminate the learner perspective currently absent from this investigation. Finally, extending this line of inquiry to other PE content domains (e.g., dance, outdoor education, fitness) would clarify whether patterns identified in ball games teaching generalise or whether domain-specific factors shape recontextualization processes differently across PE curriculum areas.

CONCLUSION

This investigation underscores the complexity of transforming physical education practice. While beginning teachers in Italy demonstrate a theoretical alignment with educational ball games pedagogies, the translation of this discourse into practice is selectively regulated by institutional constraints and mediated by self-efficacy beliefs. Self-efficacy functioned as a mediating mechanism influencing persistence in implementing innovative practices when confronted with evaluative rules and contextual constraints.

The integration of Bernstein's theory of the pedagogic device with Bandura's concept of self-efficacy provided a robust theoretical framework for understanding recontextualization as shaped by both structural-institutional forces and individual agency. Evaluative rules operating within schools—including material conditions, assessment regimes, and pupil expectations—exerted powerful regulatory effects on pedagogic practice, frequently overriding the innovative pedagogic discourse promoted in PETE. However, beginning teachers with higher domain-specific self-efficacy demonstrated greater capacity to navigate these constraints and sustain educationally oriented ball games pedagogies.

The study contributes empirical evidence regarding the impact of PETE on professional practice, a question that has proven persistently challenging across decades of research (Backman et al., 2023; Schempp & Graber, 1992). While PETE successfully transmits educational perspectives that distinguish PE from sport club contexts, substantial work remains in preparing beginning teachers for the practical implementation of innovative pedagogies within authentic school constraints. Strengthening instructional alignment between PETE coursework and school-based experiences, explicitly modelling SRL integration within ball games teaching, and providing sustained professional development during the induction period represent promising directions for enhancing PETE's influence on the field of reproduction.

Ultimately, this investigation underscores the complexity of pedagogical change in PE. Transforming established practices requires not only innovative pedagogic discourse within PETE but also attention to the evaluative rules governing school contexts, the development of beginning teachers' self-efficacy through carefully designed preparation and support and sustained critical engagement with the ideological and material conditions shaping the reproduction field. Only through such multifaceted efforts can the promise of educationally oriented, SRL-informed ball games pedagogy be realised in school PE practice.

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