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# กรอบแนวคิดการจัดการเชิงกลยุทธ์สำหรับนักศึกษา-นักกีฬาในมหาวิทยาลัยการกีฬาแห่งชาติ: การประยุกต์ใช้โมเดลการพัฒนานักกีฬาระยะยาวและปัจจัยเชิงนโยบายที่นำไปสู่ความสำเร็จทางกีฬาระดับนานาชาติ

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**บทคัดย่อ**

งานวิจัยนี้พัฒนากรอบการจัดการเชิงกลยุทธ์สำหรับนักศึกษา-นักกีฬาเพื่อเสริมสร้างบทบาทของมหาวิทยาลัยด้านกีฬาในการส่งเสริมการพัฒนาทรัพยากรมนุษย์และสังคมผ่านการกีฬา โมเดลการพัฒนานักกีฬาระยะยาวและโมเดลปัจจัยเชิงนโยบายที่นำไปสู่ความสำเร็จทางกีฬาระดับนานาชาติถูกนำมาใช้ในการอ้างอิง การวิจัยใช้การวิจัยอนาคตแบบเดลฟายและชาติพันธุ์วรรณนา จำนวน 3 รอบ การวิเคราะห์ข้อมูลดำเนินการด้วยการวิเคราะห์เนื้อหาเชิงอุปนัย ค่ามัธยฐาน และค่าพิสัยระหว่างควอไทล์ ผลการวิจัยพบว่า การจัดการเชิงกลยุทธ์สำหรับนักศึกษา-นักกีฬา ประกอบด้วย 5 ด้าน ได้แก่ ภาวะผู้นำเชิงบริหาร การฝึกสอนและการฝึกซ้อม ด้านการจัดการเรียนรู้ทางวิชาการ นวัตกรรมด้านหลักสูตร และการดำเนินงานด้านกีฬาและการจัดการข้อมูล กรอบการจัดการเชิงกลยุทธ์สำหรับนักศึกษา-นักกีฬานี้นำเสนอรูปแบบเชิงปฏิบัติในการบูรณาการระบบวิชาการและระบบการกีฬาเพื่อสนับสนุนนักศึกษา-นักกีฬาที่ต้องพัฒนาเส้นทางอาชีพคู่ขนานในประเทศกำลังพัฒนา ผลการศึกษาเน้นย้ำว่าการบูรณาการภาวะผู้นำ การฝึกสอนบนฐานหลักฐานเชิงวิทยาศาสตร์ การจัดการเรียนรู้ที่ยืดหยุ่น และการตัดสินใจบนฐานข้อมูล เป็นกลไกสำคัญของการพัฒนาการกีฬาอย่างยั่งยืน งานวิจัยนี้มีส่วนช่วยพัฒนาองค์ความรู้ในการกีฬาโดยการประยุกต์ใช้โมเดลระดับนานาชาติสู่บริบทท้องถิ่น และนำเสนอแนวทางเชิงปฏิบัติสำหรับนโยบายอุดมศึกษา นวัตกรรมเชิงสถาบัน และผลกระทบเชิงชุมชนในบริบทประเทศไทย

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# STRATEGIC MANAGEMENT FRAMEWORK FOR STUDENT-ATHLETES IN THAILAND NATIONAL SPORTS UNIVERSITY: INTEGRATING LTAD AND SPLISS MODELS

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## Abstract

This study develops the Student-Athlete Strategic Management Framework (SASMF) to strengthen the role of sport universities in promoting human and social development through sport. Guided by the Long-Term Athlete Development (LTAD) and Sports Policy factors Leading to International Sporting Success (SPLISS) models. The study employed a futures-oriented research methodology using the Ethnographic Delphi Futures Research (EDFR) technique across three rounds. Data analysis was conducted using inductive content analysis, median values, and interquartile ranges. The findings indicated that the SASMF comprises five key domains: executive leadership, coaching and training, academic pedagogy, curriculum innovation, and sports operations and data management. The SASMF provides a practical model for harmonizing academic and athletic systems to support dual-career student-athletes in developing nations. Findings emphasize leadership integration, evidence-based coaching, flexible pedagogy, and data-informed decision-making as essential drivers of sustainable sport development. This research contributes to the field of sport for development by localizing global performance models and offering actionable insights for higher education policy, institutional innovation, and community impact in the Thai context.

**Keywords:** Strategic Management, Sport University Policy, Higher Education, Student-Athlete

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**บทนำ**

Student-athletes in higher education represent a distinctive group who must balance demanding academic responsibilities with the physical, psychological, and social pressures of high-level sport. Within the Thailand National Sports University (TNSU) system—a national network of campuses dedicated to cultivating future sport professionals—the absence of a structured, integrative approach to managing student-athletes continues to hinder both learning outcomes and athletic performance. Although Thai universities have made progress in athlete education and high-performance preparation, they still lack a cohesive model that bridges academic, athletic, and policy dimensions to ensure holistic development (Chankuna et al., 2022; Chankuna & Sukdee, 2024).

Globally, two well-established models inform effective athlete development systems: the Long-Term Athlete Development (LTAD) framework and the Sports Policy factors Leading to International Sporting Success (SPLISS) model. LTAD emphasizes the physiological, psychological, and educational stages of athlete growth, illustrating how training and competition can be aligned with developmental readiness (Ford et al., 2011). SPLISS, by contrast, operates at the policy level, focusing on macrostructural factors such as governance, resource allocation, talent identification, and support systems that enable sustainable sporting excellence (De Bosscher et al., 2015). However, these frameworks have rarely been contextualized for university environments that must simultaneously fulfill educational mandates and national sport objectives (Chankuna et al., 2021; Chankuna et al., 2022; Chankuna & Sukdee, 2024; Granacher et al., 2016; Panjatawee et al., 2024; Prajongjai & Chankuna, 2022; Sukdee & Chankuna, 2021).

In Thailand, fragmented initiatives have produced isolated insights but limited systemic impact. For example, Chankuna and Sukdee (2024) highlighted the importance of social intelligence in student-athlete success, while Chankuna and colleagues (Chankuna et al., 2021) emphasized the need for effective training infrastructure. Chankuna and colleagues (Chankuna et al., 2022) identified technological and data management barriers in education systems, suggesting inefficiencies in academic support. Similarly, Prajongjai and Chankuna (2022) examined high-performance sport planning for elite athletes, though these insights have not yet been adapted for broader university contexts. Post-pandemic adaptation studies (Sukdee & Chankuna, 2021) and research on desired graduate attributes (Panjatawee et al., 2024)

further underscore the necessity for systemic innovation in curriculum design, institutional coordination, and learning environments.

Taken together, these findings reveal a persistent gap—the absence of an integrated student-athlete management system that aligns with both the organizational structure and the educational mission of Thai sport universities. While LTAD and SPLISS offer complementary foundations for athletic and institutional excellence, their practical integration within higher education remains limited. Without such a framework, universities risk underutilizing the potential of their student-athletes, thereby diminishing both academic and athletic outcomes and failing to meet their dual mission of education and elite sport development.

To address this gap, the present study employed an Ethnographic Delphi Futures Research (EDFR) design, combining ethnographic insight with iterative Delphi consensus (Srithammarat et al., 2023). The study is guided by three research questions: (1) How can the core principles of LTAD and SPLISS be effectively adapted and integrated into a student-athlete management system within Thai higher education institutions? (RQ1) (2) What institutional, pedagogical, and coaching components are essential to the holistic development of student-athletes in a university context? (RQ2) and (3) What strategic framework can guide Thai sport universities in simultaneously promoting academic achievement and athletic excellence among student-athletes? (RQ3). Thailand National Sports University was selected as the primary study setting because its vision and institutional mission strongly align with the proposed model (Chankuna et al., 2022; Chankuna & Sukdee, 2024).

## Research Objective

The objective of this research is to develop the Student-Athlete Strategic Management Framework (SASMF)—a contextually grounded model integrating LTAD and SPLISS principles—to enhance educational and athletic outcomes through coordinated engagement among administrators, coaches, instructors, curriculum developers, and sport service units.

## Literature Review

### Sport for Development and Higher Education

Sport for development (SFD) research emphasizes the potential of sport to generate educational, social, and economic benefits when supported by institutional policy and governance (Coalter, 2013; Svensson et al., 2020). Within higher education, universities increasingly serve as engines of human-capital formation and community engagement through sport-based initiatives (Isidori, & Benetton, 2015). In emerging economies, sport universities represent critical platforms for implementing SFD policies because they link formal education, athlete training, and social responsibility. Thai higher-education institutions—particularly the Thailand National Sports University (TNSU)—are positioned to advance this agenda but continue to face coordination challenges across academic and athletic domains (Chankuna & Sukdee, 2024). Integrating SFD principles into university management therefore requires models that combine institutional leadership, curriculum reform, and athlete-support systems.

### Global Frameworks: LTAD and SPLISS

Two global frameworks dominate scholarly discourse on athlete and sport-system development. The Long-Term Athlete Development (LTAD) model conceptualizes athletic growth as a lifelong, stage-based process encompassing physical literacy, training adaptation, and psychosocial well-being (Ford et al., 2011; Perri et al., 2022). LTAD's educational component encourages alignment between learning outcomes and performance milestones, an approach consistent with human-development perspectives in sport education. Conversely, the Sports Policy factors Leading to International Sporting Success (SPLISS) model examines macro-level determinants of national sport success across nine policy pillars, including financial support, coaching provision, talent development, and career support (De Bosscher et al., 2015). SPLISS has been widely applied in Europe and North America to evaluate sport-policy efficiency but has received limited adaptation in Southeast Asian university systems (Chankuna et al., 2021; Granacher et al., 2016).

### Thai Context: Fragmented Integration of Sport and Education

Research on Thai sport development highlights progress in specific areas but limited systemic integration. Studies have addressed social intelligence among student-athletes (Chankuna & Sukdee, 2024), facility management and training efficiency (Chankuna et al., 2021), and technological barriers in educational data management (Chankuna et al., 2022). Likewise,

Prajongjai and Chankuna (2022) demonstrated how structured performance planning enhances elite athlete outcomes, while Sukdee and Chankuna (2021) explored post-pandemic adaptation in physical-education settings. Despite these advances, Thai sports universities still lack a coherent governance framework that integrates athletic development with academic learning and institutional policy. This fragmentation limits their ability to fulfill the dual mandate of cultivating both academic excellence and sporting success—key indicators of national development in the SFD paradigm.

**Innovation and Governance in Sport Universities**

From a management perspective, sport universities function as hybrid organizations that must balance their educational, athletic, and community service missions. Contemporary studies of hybrid governance show that institutions combining social aims and operational performance must innovate in board structure, mission alignment, and accountability (Banerjee et al., 2024). Moreover, integrating data analytics into sport management supports evidence-based decision-making, performance monitoring, and institutional coordination—an approach increasingly explored in digital sport organizations (Qi et al., 2024). Within the Thai context, innovation in sport management remains uneven, often dependent on leadership quality and resource allocation (Chankuna et al., 2022). Embedding innovation within governance structures aligns with the broader goals of SFD, as it promotes equitable access, sustainability, and accountability. Consequently, adapting LTAD and SPLISS principles to Thai universities offers a pathway to organizational innovation that strengthens the link between sport policy, education, and social impact.

Embedding innovation within governance structures aligns with the broader goals of sport development, as it fosters equitable access, sustainability, and accountability. In dynamic governance environments, sport organizations are increasingly adopting hybrid structures and innovative practices to align mission and efficiency (Gerke & Dickson, 2025). At the same time, integrating data analytics into sport management underpins evidence-based decisions, performance monitoring, and institutional coordination—an approach gaining traction in digital sports governance research (Thompson et al., 2023). Within the Thai context, however, innovation in sport management remains patchy and contingent upon leadership quality and resource distribution (Chankuna et al., 2022). Therefore, by embedding LTAD and SPLISS principles into governance reforms, universities can not only enhance operational

performance but also contribute to national development goals, linking sport policy, education, and social impact.

### Research Gap and Theoretical Direction

Although LTAD and SPLISS provide comprehensive frameworks for athlete and system development, their combined application within university-based sport education remains unexplored (De Bosscher et al., 2015; Ford et al., 2011). Existing Thai studies tend to address isolated dimensions—training science, pedagogy, or policy—without a unifying strategic model (Chankuna & Sukdee, 2024; Panjatawee et al., 2024; Prajongjai & Chankuna, 2022; Sukdee & Chankuna, 2021). This gap underscores the need for a localized, integrative framework that reflects Thailand's educational governance, cultural values, and sport infrastructure. Building upon ethnographic insight and expert consensus through the Ethnographic Delphi Futures Research (EDFR) approach (Srithammarat et al., 2023), the current study aims to synthesize global best practices into a contextually grounded management model.

## Methodology

### Research Design

This study employed the Ethnographic Delphi Futures Research (EDFR) design, an emerging methodological approach that integrates the contextual depth of ethnography with the structured consensus process of the Delphi technique. EDFR was chosen because it enables both a descriptive understanding of present practices and a prescriptive exploration of preferred future scenarios (Srithammarat et al., 2023; Priebe et al., 2025). The ethnographic component allowed the researcher to interpret the cultural and institutional dynamics shaping student-athlete management within Thai sports universities, while the Delphi process facilitated iterative expert reflection to achieve consensus on the desirable future framework. Through multiple rounds of data validation and refinement, EDFR ensures that the resulting conceptual model is not only empirically grounded but also contextually adaptable to policy and institutional realities. The primary aim of this design was to develop the Student-Athlete Strategic Management Framework (SASMF)—a futures-oriented model integrating LTAD and SPLISS principles for sustainable academic-athletic development within Thai higher education.

### Data Sources

This study employed three primary sources of qualitative data to ensure depth, triangulation, and methodological rigor within the Ethnographic Delphi Futures Research (EDFR)

framework. First, semi-structured, in-depth interviews were conducted with 12 experts, informed by national policy documents and strategic plans of the Thailand National Sports University and the Sports Authority of Thailand, as well as international frameworks such as LTAD and SPLISS and related empirical studies (e.g., Chankuna et al., 2021; Chankuna et al., 2022; Chankuna & Sukdee, 2024). The expert panel size exceeded the commonly recommended range of 6–10 participants for qualitative research (Sandelowski, 1995). The expert panel comprised three university administrators, four curriculum designers, and five national team coaches or sports scientists. Selection criteria required participants to hold at least a Master's degree, possess a minimum of five years of experience in managing student-athletes at the national level, and demonstrate a proven record of supervising medal-winning athletes. This phase established the conceptual and contextual foundation for subsequent stages. Second, ethnographic expert interviews were undertaken with the same 12 purposively selected informants. Third, Delphi consensus rounds were subsequently conducted with this same cohort to refine and validate emerging themes.

The first round employed open-ended questionnaires derived from interview themes to elicit broad perspectives from the panel of experts. The second round presented structured items for rating and consensus measurement. In the third round, the same rating scale from the second round was used, with the addition of the median position indicated and each expert's previous response from Round 2 marked on the scale. This instrument was then returned to the same experts to allow them to confirm or revise their prior responses.

Empirical triangulation was strengthened by integrating findings from previous research by Chankuna and colleagues (2021–2024), ensuring consistency and external validity. Instrument quality and relevance were confirmed through expert review by five independent scholars, yielding an average Item-level Content Validity Index (I-CVI) of 0.96—indicative of strong content validity (Ayre & Scally, 2014).

**Data Analysis**

The data were analyzed through an inductive content analysis process embedded within the EDFR methodology, progressing systematically from narrative exploration to structured consensus-building. In the first stage, open coding was applied to interview transcripts and documentary materials to identify recurring concepts without imposing preexisting categories. These initial codes were then organized into conceptual clusters such as policy integration, training periodization, academic flexibility, and performance data systems. During the abstraction and Delphi Round 1 phase, these clusters were translated into

future-oriented statements aligned with the five domains of the Student-Athlete Strategic Management Framework (SASMF) and cross-referenced with LTAD stages and SPLISS pillars for theoretical coherence. Experts then qualitatively evaluated these statements, reflecting both the current realities and envisioned improvements of student-athlete management in Thai universities. In Delphi Round 2, the refined statements were quantitatively ranked based on importance and feasibility, with consensus assessed through median scores and interquartile ranges (IQRs)—only items meeting the predetermined consensus threshold were retained for synthesis. Finally, in the framework synthesis stage, validated themes were integrated into the SASMF structure to produce a model that combines ethnographic insights, expert consensus, and contextual adaptability to Thai higher education policy and practice. Final indicators were retained based on a median value of 3.50 or higher, and the level of expert agreement was determined using the interquartile range (IQR) between the first and third quartiles, with acceptable consensus defined as an IQR not exceeding 1.50.

**Validation and Trustworthiness**

To enhance the credibility, dependability, and confirmability of the findings, multiple validation strategies were employed consistent with the EDFR framework. Credibility was established through member checking, whereby preliminary interpretations and Delphi outcomes were returned to four key informants for feedback to ensure that the results accurately represented their views and institutional realities. Dependability was reinforced through methodological triangulation—integrating data from documents, interviews, and Delphi rounds to cross-verify patterns and interpretations. Confirmability was ensured by maintaining a detailed audit trail of coding decisions, consensus criteria, and framework development steps, allowing for transparency in how the Student-Athlete Strategic Management Framework (SASMF) evolved across Delphi iterations. Transferability was supported by providing thick descriptions of the institutional and policy contexts of Thai sports universities, enabling readers to assess the framework's applicability to other higher education or sport development settings. Finally, expert validation was achieved through review by five independent scholars in sport management and higher education, who evaluated the conceptual coherence and practical relevance of the SASMF, leading to minor adjustments for clarity and theoretical consistency. Together, these strategies ensured that the findings are both contextually grounded and theoretically robust, reflecting the participatory, futures-oriented ethos of EDFR methodology (Adler, 2022).

## Results

The findings derived from the documentary analysis, ethnographic interviews, and two iterative Delphi rounds revealed five thematic clusters that collectively define the domains of the Student-Athlete Strategic Management Framework (SASMF). These domains include Executive Leadership, Coaching and Training, Academic Pedagogy, Curriculum Innovation, and Sports Operations and Data Management. Each cluster encapsulates both the rich narrative insights gained from institutional stakeholders and the quantitative consensus established through the EDFR process. The integration of these findings demonstrates not only strong internal coherence among stakeholder perspectives but also clear theoretical alignment with the developmental logic of the Long-Term Athlete Development (LTAD) stages and the policy-oriented SPLISS pillars. Together, these domains represent an empirically validated, contextually grounded, and future-oriented framework for managing student-athletes in Thai higher education.

### Executive Leadership (University Administrators)

Administrators emphasized the pivotal role of leadership in bridging academic and athletic systems within sports universities. The Delphi analysis revealed three strategic priorities that achieved high consensus across experts.

1. Coach Capacity Development (Mdn = 5.00, IQR = 0.50), highlighting the importance of continuous professional learning in sports science. One administrator noted, “To truly raise performance, we must invest in coaches’ ability to use sports science effectively—this includes training on data analytics and recovery strategies” (Administrator #2).

2. Learning Management Guidelines for Athletes (Mdn = 5.00, IQR = 0.00), emphasizing the need for flexible and adaptive academic pathways that accommodate competition schedules. As one participant explained, “Student-athletes need clear, flexible academic policies that recognize their training and competition demands” (Administrator #1).

3. Integration of LTAD and SPLISS Principles (Mdn = 5.00, IQR = 0.00), calling for long-term strategic planning and policy coherence grounded in international standards. “Our policies must reflect global best practices like LTAD and SPLISS to systematically support long-term athlete growth and career transition” (Administrator #3).

Collectively, these priorities demonstrate that effective leadership in sport universities extends beyond administrative oversight to strategic alignment between education and athletic development. They correspond with the Train to Compete and Train to Win stages of LTAD, as well as SPLISS Pillars 1 (Financial Support) and 2 (Governance), underscoring the

strategic importance of institutional policy alignment with international performance and development benchmarks.

**Coaching and Training (Sports Coaches)**

Coaches underscored the importance of structured programming and innovation in athlete development. The Delphi analysis revealed strong consensus across key areas, reflecting both practical challenges and forward-looking strategies for performance enhancement.

1. Periodized Training Programs (Mdn = 5.00, IQR = 0.00) were identified as a central priority. Coaches consistently highlighted the need for systematic planning that balances workload and recovery. One participant remarked, “We plan training cycles carefully but lack technology to monitor athletes’ load in real time” (Coach #5).

2. Physiological-Based Athlete Development (Mdn = 4.7, IQR = 0.5) achieved high consensus, emphasizing the role of scientific testing in tailoring individual performance programs. As one coach explained, “Tailoring training based on physiological data could improve results, but we need better access to testing” (Coach #1).

Partial consensus was observed for two additional themes: Technology-Enhanced Coaching (Mdn = 4.00, IQR = 1.00) and Research Engagement (Mdn = 4.00, IQR = 1.00), indicating variability in institutional resources and collaboration between academic and coaching staff. Coaches expressed interest in using digital tools, data analytics, and applied research to bridge the gap between theory and practice, though uneven infrastructure remains a barrier.

These findings align with LTAD’s emphasis on training optimization and performance monitoring across developmental stages and reflect SPLISS Pillars 5 (Coaching Provision) and 8 (Scientific Research & Innovation). Collectively, they demonstrate that the advancement of coaching effectiveness within Thai sports universities depends on systematic periodization, data-informed decision-making, and stronger academic–practice integration.

**Academic Pedagogy (Instructors)**

Instructors demonstrated strong consensus on four pedagogical practices that facilitate academic success among student-athletes while maintaining educational rigor and inclusivity.

1. Individualized Instructional Design (Mdn = 5.00, IQR = 0.00), emphasizing the need for flexible curriculum planning that accommodates athletes’ schedules. One instructor noted, “Adjusting lesson plans and deadlines for athletes is often informal; formal guidelines would help consistency” (Instructor #2).

2. Learning Outcome Integration (Mdn = 5.00, IQR = 0.00), highlighting the incorporation of transferable skills such as discipline, time management, and leadership within course objectives. “We embed skills like time management and leadership within course objectives to reflect athletes’ realities,” explained one participant (Instructor #5).

3. Diverse Assessment Methods (Mdn = 5.00, IQR = 0.00), reflecting the adoption of multiple evaluation formats—including projects, reflective journals, and peer assessments—to balance fairness and flexibility. “Using projects, reflections, and peer reviews provides flexibility while maintaining rigor,” observed an instructor (Instructor #1).

4. Faculty Professional Development (Mdn = 5.00, IQR = 0.00), underlining the importance of continuous capacity building for instructors through workshops and scholarly engagement. “I’m eager to deepen my expertise in sport-specific education through workshops and research,” stated one faculty member (Instructor #3).

These pedagogical practices resonate with LTAD’s principle of lifelong learning and SPLISS Pillar 9 (Career and Education Support), emphasizing the centrality of academic flexibility and educator development in sustaining dual-career pathways for student-athletes. Collectively, the findings highlight that instructors play a transformative role in aligning pedagogical design with athletic development, ensuring both academic integrity and holistic growth within university sport environments.

**Curriculum Innovation (Curriculum Designers)**

Curriculum designers identified reform-oriented strategies that align academic programs with professional competencies and evolving industry needs. The Delphi results demonstrated a clear consensus across key themes related to curriculum modernization and knowledge integration.

1. Non-Athlete Skill Integration (Mdn = 5.00, IQR = 0.00), emphasizing experiential learning opportunities for all students. As one curriculum expert explained, “Non-athlete students gain valuable hands-on experience through sport-related practicums” (Designer #1).

2. Industry-Driven Curriculum Design (Mdn = 5.00, IQR = 0.00), focusing on aligning course content with labor market demands and emerging sports business trends. “We continuously update content to align with emerging sports industry trends and job market demands,” noted one respondent (Designer #3).

3. Research Promotion (Mdn = 4.00, IQR = 1.00; partial consensus), highlighting the growing institutional support for academic research as a driver of innovation and professional

recognition. “Incentives for faculty to publish sports science research have boosted our program’s academic profile,” observed another participant (Designer #2).

Collectively, these strategies underscore the transformative role of curriculum design in connecting classroom learning with real-world application. They correspond to LTAD’s “Active for Life” stage, which promotes sustained engagement in sport across the lifespan, and to SPLISS Pillars 3 (Sport Participation) and 7 (Career and Support Services), emphasizing the integration of educational relevance, employability, and long-term athlete development. By promoting interdisciplinary collaboration and evidence-informed content, curriculum innovation serves as a bridge between educational excellence and industry readiness within Thai sports universities.

**Sports Operations and Data Management (Sports Affairs Department)**

Operational personnel emphasized the critical role of data infrastructure and performance testing in sustaining efficient student-athlete management. The Delphi results revealed strong consensus across all identified themes, underscoring the foundational importance of systematic operations in university sport ecosystems.

1. Comprehensive Athlete–Coach Database (Mdn = 5.00, IQR = 0.00), highlighting the necessity of centralized digital systems for integrated record-keeping. One participant explained, “Building a centralized system is crucial for tracking athlete performance, academic progress, and injury history” (Staff #4).

2. Contextual Sport Development Strategy (Mdn = 5.00, IQR = 0.00), emphasizing locally responsive and resource-aligned planning. As one staff member noted, “Our strategies are tailored to fit the university’s resources and the national sports context” (Staff #2).

3. Potential Testing and Monitoring (Mdn = 5.00, IQR = 0.00), underscoring the significance of periodic assessments in guiding personalized training and academic interventions. “Regular physical and psychological assessments help coaches and instructors tailor their programs,” observed another respondent (Staff #3).

These operational priorities align with LTAD’s principle of continuous monitoring and evaluation across all developmental stages, as well as SPLISS Pillars 2 (Governance) and 6 (Training Facilities). Collectively, they reveal that a robust operational infrastructure—rooted in data integration, testing, and context-based strategy—forms the backbone of evidence-based student-athlete management. By institutionalizing these practices, Thai sports universities can enhance accountability, promote data-driven decision-making, and strengthen long-term athlete development pathways.

**Expected Outcomes**

The integration of consensus-based strategies across the five SASMF domains is projected to yield three transformative outcomes that advance both academic and athletic excellence within Thai sports universities.

1. Achievement of Academic Learning Outcomes—enabling student-athletes to meet or exceed program benchmarks despite the challenges of balancing dual-career pathways. Academic flexibility, individualized pedagogy, and outcome-based assessment together ensure that learning integrity is maintained while accommodating athletic commitments.

2. Maximized Athletic Potential—driven by the application of periodized training, scientific assessment, and technology-enhanced coaching. These practices collectively strengthen performance monitoring, recovery management, and evidence-informed decision-making across LTAD stages.

3. Innovation in Student-Athlete Management—as the Student-Athlete Strategic Management Framework (SASMF) provides a consensus-driven, theoretically integrated model that bridges Thai university governance with the LTAD and SPLISS systems. This outcome represents a paradigm shift from fragmented practices toward a holistic, data-driven, and institutionally coordinated approach to sport development.

Together, these outcomes illustrate how the integration of educational, athletic, and operational systems can enhance institutional performance and contribute to Thailand's broader goals of sport-led social and human capital development. Table 1 presents the EDFR-derived consensus values across stakeholder groups, while Table 2 illustrates the theoretical mapping of each theme to the LTAD stages and SPLISS pillars—reinforcing the framework's dual strength in global relevance and local applicability.

**Table 1** EDFR Consensus Analysis of SASMF Themes

| SASMF Domain | Theme / Strategy | Key Performance Indicator | Delphi Results (Mdn) | IQR | Consensus Status |
|---|---|---|---|---|---|
| **Executive Leadership** | Coach capacity development | Strong emphasis on need for sports science training | 5.00 | 0.50 | Consensus |
| | Learning management guidelines for athletes | Flexible academic policies highlighted by most admins | 5.00 | 0.00 | Consensus |
| | Integration of LTAD & SPLISS | Alignment with global best practices noted | 5.00 | 0.00 | Consensus |
| **Coaching & Training** | Periodized training programs | Coaches emphasize workload management | 5.00 | 0.00 | Consensus |
| | Technology-enhanced coaching | Wearables and video analysis underused | 4.00 | 1.00 | Partial consensus |
| | Physiological-based athlete development | Strong need for access to testing | 5.00 | 0.00 | Consensus |
| | Research engagement | Mixed but positive support for research involvement | 4.00 | 1.00 | Partial consensus |
| **Academic Pedagogy** | Individualized instructional design | Need for formal guidelines confirmed | 5.00 | 0.00 | Consensus |

| SASMF Domain | Theme / Strategy | Key Performance Indicator | Delphi Results (Mdn) | IQR | Consensus Status |
|---|---|---|---|---|---|
| Curriculum Innovation | Learning outcome integration | Broad support linking academics & athletics | 5.00 | 0.00 | Consensus |
| | Diverse assessment methods | Flexible assessment endorsed | 5.00 | 0.00 | Consensus |
| | Faculty professional development | Strong demand for capacity-building | 5.00 | 0.00 | Consensus |
| | Non-athlete skill integration | Industry-based modules proposed | 5.00 | 0.00 | Consensus |
| | Industry-driven curriculum design | Alignment with labor market stressed | 5.00 | 0.00 | Consensus |
| | Research promotion | Incentives for faculty research noted | 4.00 | 1.00 | Partial consensus |
| Sports Operations & Data Management | Athlete-coach database | High need for centralized system | 5.00 | 0.00 | Consensus |
| | Contextual sport development strategy | Policies aligned with national goals | 5.00 | 0.00 | Consensus |
| | Potential testing & monitoring | Agreed as essential for training decisions | 5.00 | 0.00 | Consensus |

*Remark*. Established by authors on November 10, 2025.

**Table 2** Mapping of SASMF Themes to LTAD Stages and SPLISS Pillars

| SASMF Domain | Theme / Strategy | Relevant LTAD Stage(s) | Relevant SPLISS Pillar(s) | Rationale |
|---|---|---|---|---|
| **Executive Leadership** | Coach capacity development | Train to Train, Train to Compete | Pillar 5: Coaching Provision | Coaches require advanced skills to support long-term progression and performance. |
| | Learning management guidelines for athletes | All stages (Fundamentals with Train to Win) | Pillar 9: Career & Post-Career Support | Academic flexibility ensures athletes can pursue both education and sport across LTAD stages. |
| | Integration of LTAD & SPLISS | Train to Compete, Train to Win | Pillar 1: Financial Support; Pillar 2: Governance | Institutional policies must align with LTAD principles and SPLISS structures for sustainability. |
| **Coaching & Training** | Periodized training programs | Train to Train, Train to Compete | Pillar 6: Training Facilities | Periodization ensures systematic progression and safe workload management. |
| | Technology-enhanced coaching | Train to Compete, Train to Win | Pillar 8: (Scientific Research & Innovation) | Technology adoption strengthens high-performance preparation. |

| SASMF Domain | Theme / Strategy | Relevant LTAD Stage(s) | Relevant SPLISS Pillar(s) | Rationale |
|---|---|---|---|---|
| **Academic Pedagogy** | Physiological-based athlete development | Fundamentals with Train to Win | Pillar 8: (Scientific Research & Innovation) | Physiological testing ensures athlete development matches biological maturation. |
| | Research engagement | Train to Compete, Train to Win | Pillar 8: Scientific Research | Coaches' collaboration with researchers embeds innovation into practice. |
| | Individualized instructional design | All stages | Pillar 9: Career & Education Support | Tailored teaching supports athletes balancing dual careers at all LTAD stages. |
| | Learning outcome integration | Train to Train with Train to Win | Pillar 3: Sport Participation | Embedding transferable skills (leadership, discipline) strengthens both academic and athletic pathways. |
| | Diverse assessment methods | All stages | Pillar 9: Career & Education Support | Multiple assessments accommodate sport demands without compromising rigor. |

| SASMF Domain | Theme / Strategy | Relevant LTAD Stage(s) | Relevant SPLISS Pillar(s) | Rationale |
|---|---|---|---|---|
| **Curriculum Innovation** | Faculty professional development | All stages | Pillar 4: Talent Identification & Development | Faculty expertise underpins holistic athlete development. Curricula for all students foster wider sport literacy and employability. Curricula aligned to market needs enhance post-sport careers. Faculty-led sports research contributes directly to innovation and curriculum enrichment. |
| | Non-athlete skill integration | Fundamentals with Active for Life | Pillar 3: Sport Participation | |
| | Industry-driven curriculum design | Active for Life, Train to Win | Pillar 7: (Athletic & Career Support Services) | |
| | Research promotion | Train to Compete, Train to Win | Pillar 8: Scientific Research | |
| **Sports Operations & Data Management** | Athlete-coach database | All stages | Pillar 2: Organization & Governance | Centralized data strengthens institutional monitoring and planning. Strategies must align institutional missions with national sport systems. |
| | Contextual sport development strategy | Fundamentals with Active for Life | Pillar 2: Organization & Governance | |

| SASMF Domain | Theme / Strategy | Relevant LTAD Stage(s) | Relevant SPLISS Pillar(s) | Rationale |
|---|---|---|---|---|
| | Potential testing & monitoring | Train to Train, Train to Compete | Pillar 6: Training Facilities; Pillar 8: Scientific Research | Regular testing ensures evidence-based training decisions. |

*Remark*. Established by authors on November 10, 2025.

## Discussion

The findings of this study directly address the three guiding research questions and demonstrate the effectiveness of applying the Ethnographic Delphi Futures Research (EDFR) methodology to develop a consensus-based, contextually grounded framework for managing student-athletes in Thai higher education. By integrating qualitative ethnographic insight with iterative expert consensus, the study not only identified key operational and pedagogical themes but also established a validated model—the Student-Athlete Strategic Management Framework (SASMF)—that harmonizes global sport development principles (LTAD and SPLISS) with local institutional realities. The five SASMF domains, derived through both inductive and Delphi-based synthesis, collectively provide a roadmap for future-oriented governance, pedagogy, and sport operations in university systems.

### Adaptation of LTAD and SPLISS (RQ1)

The first research question examined how the principles of the Long-Term Athlete Development (LTAD) and Sports Policy factors Leading to International Sporting Success (SPLISS) models can be effectively adapted within Thai sports universities. The findings revealed that, although both frameworks provide robust international benchmarks, their practical value depends on contextual alignment with national and institutional structures. Administrators reached a strong consensus (Mdn = 5.00, IQR = 0.00) on integrating LTAD's long-term planning principles and SPLISS's governance and career-support pillars into university-level strategies—particularly in policy design, athlete welfare, and leadership development. These results reinforce the view of De Bosscher et al. (2015) that policy frameworks achieve meaningful outcomes only when adapted to the institutional mission and socio-cultural realities of a nation. Through the EDFR process, this study demonstrated that Thai sports universities can selectively embed LTAD's developmental stages and SPLISS's systemic

dimensions to formulate feasible, context-sensitive management strategies that balance athletic excellence with educational integrity.

**Institutional, Pedagogical, and Coaching Components (RQ2)**

The second research question examined the institutional, pedagogical, and coaching components necessary to holistically support student-athlete development. The analysis identified five interrelated clusters—executive leadership, coaching and training, academic pedagogy, curriculum innovation, and sports operations—which collectively define the SASMF's structure. Coaches emphasized the value of physiologically-based training and workload periodization (Mdn = 5.00, IQR = 0.00), echoing the findings of Ford et al. (2011) that sustained athletic progression requires stage-specific, evidence-based programming. Instructors underscored the importance of flexible pedagogy, diverse assessment methods, and continuous professional development, aligning with SPLISS pillar 9, which advocates for comprehensive educational and career support. Additionally, curriculum designers and sports affairs staff highlighted the integration of industry-relevant programs, centralized data systems, and systematic athlete monitoring as crucial to bridging academic and athletic domains. These interconnected practices extend prior Thai studies (Chankuna et al., 2021; 2022; Chankuna & Sukdee, 2024) by illustrating how institutional and pedagogical reforms can be coordinated through an integrated, consensus-based framework, rather than through fragmented, discipline-specific initiatives.

**Framework for Academic and Athletic Excellence (RQ3)**

The third research question addressed the development of a strategic framework to support dual academic and athletic excellence within Thai sports universities. The validated Student-Athlete Strategic Management Framework (SASMF) directly responds to this inquiry by integrating the five thematic clusters—executive leadership, coaching and training, academic pedagogy, curriculum innovation, and sports operations—into a coherent, future-oriented model. Unlike earlier fragmented approaches that separated educational and athletic priorities, the SASMF positions student-athletes as dual-role stakeholders who require synchronized institutional support across policy, pedagogy, and operations (Chankuna & Sukdee, 2024; Ford et al., 2011).

The strong consensus values reported in Table 1 affirm the SASMF's institutional feasibility, while Table 2 reinforces its theoretical robustness by mapping each domain to LTAD stages and SPLISS pillars, confirming global alignment (Chankuna et al., 2021; De Bosscher et al., 2015). This dual validation ensures that the SASMF is both contextually grounded and

internationally informed, making it a pioneering framework for Thai higher education. It extends prior research (Chankuna et al., 2022; Prajongjai & Chankuna, 2022) by transcending isolated studies on training science or pedagogy to present a comprehensive, systems-based model that unites policy, practice, and performance into an integrated mechanism for sustainable student-athlete development.

**New Knowledge Contributions**

A central contribution of this study lies in the introduction of the Student-Athlete Strategic Management Framework (SASMF) as a holistic, consensus-driven model tailored to the context of Thai higher education. Unlike previous studies that analyzed athletic or academic dimensions in isolation, the SASMF offers an integrated approach that unites policy alignment, coaching methodology, pedagogical flexibility, curriculum responsiveness, and data-driven operations into a single strategic framework. This synthesis extends the theoretical frontiers of sport education and management by demonstrating how globally recognized models such as LTAD and SPLISS can be localized through expert consensus and ethnographic validation under the EDFR methodology. Beyond theoretical innovation, the framework contributes to governance reform, cross-sector collaboration, and evidence-based strategic planning in sport-oriented institutions within emerging economies. Most importantly, SASMF advances the principle of academic–athletic integrity, ensuring that student-athletes are supported not merely as performers but as holistic learners within sustainable university ecosystems.

## Conclusion

This study addressed the urgent need for a systematic and integrated approach to managing student-athletes in Thai sports universities. By proposing the Student-Athlete Strategic Management Framework (SASMF), it bridges the persistent gap between educational and athletic development within higher education. Grounded in internationally recognized models such as LTAD and SPLISS, and refined through local institutional realities and expert consensus, the SASMF demonstrates how universities can simultaneously foster academic excellence and elite sport performance. The framework synthesizes five interdependent domains—executive leadership, coaching and training, academic pedagogy, curriculum innovation, and sports operations and data management—offering a holistic roadmap for supporting student-athletes as dual-role individuals.

**Theory Contribution**

This research advances the theoretical understanding of dual-career development in sport-oriented higher education by operationalizing the LTAD and SPLISS models within the Thai university context. While previous studies often applied these frameworks separately or in Western elite-sport systems, this study develops a hybridized model—the SASMF—explicitly adapted to the socio-cultural and institutional conditions of an emerging sports nation. Theoretically, it demonstrates that global models can be localized through the Ethnographic Delphi Futures Research (EDFR) process, where expert consensus ensures both rigor and contextual relevance. This finding challenges the notion of universal applicability in sport-development models and underscores that effectiveness depends on governance, pedagogy, and resource realities in higher education. Conceptually, the SASMF redefines student-athletes as dynamic agents within an institutional ecosystem, shifting from individual-centric to systems-based perspectives on performance and learning. This reconceptualization expands discourse on governance innovation, interdisciplinarity, and institutional design in sport education policy, particularly in the Global South.

**Practical Contribution**

Beyond its theoretical advances, this study offers practical guidance for improving student-athlete management within Thai higher education institutions. The Student-Athlete Strategic Management Framework (SASMF) provides a comprehensive yet adaptable model that supports effective coordination among university administrators, coaches, instructors, curriculum developers, and sports affairs departments. For administrators, the framework emphasizes the alignment of institutional policies, leadership development, and resource allocation with academic and athletic goals. Coaches and sport scientists are encouraged to apply evidence-based methods—such as LTAD-informed periodization, workload monitoring, and physiological assessment—to enhance performance and minimize injury risk. Instructors can adopt flexible pedagogy, diverse assessment approaches, and continuous professional development to sustain academic quality alongside athletic demands. Meanwhile, curriculum developers can strengthen the relevance of programs through interdisciplinary design and applied research, ensuring alignment with labor market and innovation needs. Finally, sports affairs departments are guided to develop centralized databases, conduct regular athlete testing, and link institutional operations with national sport strategies. Collectively, these strategies create a cohesive operational ecosystem that integrates sport and education,

supporting Thailand's national objectives in talent identification, international competitiveness, and sustainable athlete development within a whole-university approach.

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Artificial intelligence–assisted technologies (including ChatGPT, an AI language model by OpenAI) were used only for language refinement, reference formatting, and stylistic editing. All conceptual development, data analysis, interpretation, and final writing were conducted solely by the authors.

## References

Adler, R. H. (2022). Trustworthiness in qualitative research. *Journal of Human Lactation*, *38*(4), 598–602. https://doi.org/10.1177/08903344221116620

Ayre, C., & Scally, A. J. (2014). Critical values for Lawshe's content validity ratio. *Measurement and Evaluation in Counseling and Development*, *47*(1), 79–86. https://doi.org/10.1177/0748175613513808

Banerjee, A., Carlsson-Wall, M., & Nordqvist, M. (2024). Hybrid board governance: Exploring the challenges in implementing social impact measurements. *The British Accounting Review*, *56*(5), 101359. https://doi.org/https://doi.org/10.1016/j.bar.2024.101359

Chankuna, D., & Sukdee, D. (2024). A causal model of social intelligence of student-athlete in Thailand National Sports University Chiang Mai campus. *FOYER: The Journal of Humanities, Social Sciences, and Education*, *7*(2), 357-391.

Chankuna, D., Chanthonsarasom, A., & Sriboon, N. (2021). Perception of sports training facilities efficiency and guideline for developing national sports training center of Sports Authority of Thailand. *Journal of Sports Science and Technology*, *21*(2), 125-140. https://doi.org/10.14456 /jsst.2021.16

Chankuna, D., Thanaiudompat, T., & Sujintawong. P. (2022). The analysis of problems and needs of educational information technology of Thailand National Sports

University. *Education Quarterly Reviews*, *5*(2), 128-132. https://doi.org/10.31014/aior.1993.05.02.474

Coalter, F. (2013). *Sport for development: What game are we playing?* Routledge. https://doi.org/10.4324/9780203861257

De Bosscher, V., Shibil, S., Westerbeek, H., & Van Bottenburg, M. (2015). *Successful elite sport policies: An international comparison of the Sportspolicy Factors Leading to International Sporting Success (SPLISS 2.0) in 15 nations*. Meyer & Meyer Verlag.

Ford, P., De Ste Croix, M., Lloyd, R., Meyers, R., Moosavi, M., Oliver, J., Till, K., & Williams, C. (2011). The Long-Term Athlete Development model: Physiological evidence and application. *Journal of Sports Sciences*, *29*(4), 389–402. https://doi.org/10.1080/02640414.2010.536849

Gerke, A., & Dickson, G. (2025). Theoretical foundations for service innovation research in sport management – insights from nonprofit sport organisations. *European Sport Management Quarterly*, *25*(5), 858–881. https://doi.org/10.1080/16184742.2025.2454028

Granacher, U., Lesinski, M., Büsch, D., Muehlbauer, T., Prieske, O., Puta, C., Gollhofer, A., & Behm, D. G. (2016). Effects of resistance training in youth athletes on muscular fitness and athletic performance: a conceptual model for long-term athlete development. *Frontiers in physiology*, *7*, 164. https://doi.org/10.3389/fphys.2016.00164

Isidori, E., & Benetton, M. (2015). Sport as education: Between dignity and human rights. *Procedia - Social and Behavioral Sciences*, *197*, 686–693. https://doi.org/https://doi.org/10.1016/j.sbspro.2015.07.060

Panjatawee, S., Ownsungnoen, A., Chankuna, D., Numboonjit, A., Suriyo, A., Imsamranrat, P., Sonsuwan, B., Arkornsakul, P., Siriprayong, C., & Panyakham, P. (2024). The study of desired graduate characteristics of Bachelor of Business Administration Program in Sports Management, Thailand National Sports University, Chiang Mai campus. *Journal of Education Silpakorn University*, *22*(1), 231-248.

Perri, T., Duffield, R., Murphy, A., Mabon, T., & Reid, M. (2022). Macro periodisation of competition in international women's tennis: a long-term athlete development perspective. *Journal of Science and Medicine in Sport*, *25*, S17–S18. https://doi.org/https://doi.org/10.1016/j.jsams.2022.09.148

Prajongjai, V., & Chankuna, D. (2022). High performance development of Thai badminton national players for Olympic Games Tokyo 2020. *Journal of Sports Science and Technology*, *22*(1), 8-24. https://doi.org/10.14456/jsst.2022.1

Priebe, M., Warnke, P., & Weber, K. M. (2025). Setting the scene for discussing innovation policy directions: Foresight as a practice of synchronizing. *Futures*, *173*, 103681. https://doi.org/https://doi.org/10.1016/j.futures.2025.103681

Qi, Y., Sajadi, S. M., Baghaei, S., Rezaei, R., & Li, W. (2024). Digital technologies in sports: Opportunities, challenges, and strategies for safeguarding athlete wellbeing and competitive integrity in the digital era. *Technology in Society*, *77*, 102496. https://doi.org/https://doi.org/10.1016/j.techsoc.2024.102496

Sandelowski, M. (1995). Sample size in qualitative research. *Research in Nursing & Health*, *18*(2), 179–183. https://doi.org/https://doi.org/10.1002/nur.4770180211

Srithammarat, T., Wannapairo, S., & Vehachart, R. (2023). *The desirable scenario of educational quality assurance with world-class standard in vocational education*. *Journal of Education and Innovation*, *25*(2), 53-64.

Strauss, A, & Corbin, J. (1990). *Basics of qualitative research: grounded theory procedures and techniques*. Sage.

Sukdee, T., & Chankuna, D. (2021). Factors influencing adjustment in physical education and sports learning after the COVID-19 pandemic among students in Faculty of Education, Thailand National Sports University. *World Journal of Education*, *11*(2), 24-35. https://doi.org/10.5430/wje.v11n2p24

Svensson, P. G., Andersson, F. O., Mahoney, T. Q., & Ha, J.-P. (2020). Antecedents and outcomes of social innovation: A global study of sport for development and peace organizations. *Sport Management Review*, *23*(4), 657–670. https://doi.org/https://doi.org/10.1016/j.smr.2019.08.001

Thompson, A., Lachance, E. L., Parent, M. M., & Hoye, R. (2023). A systematic review of governance principles in sport. *European Sport Management Quarterly*, *23*(6), 1863–1888. https://doi.org/10.1080/16184742.2022.2077795

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