Preparing Physical Education Teachers as School Health Promoters: Professional Competence, Psychological Resilience and Social-Spiritual Values in Chinese and Kyrgyz Sports Universities

ABSTRACT

Aim: Physical education teachers deliver much of the health promotion that schools achieve, yet their preparation is often assessed on technical knowledge alone. This study examined how professional competence, psychological resilience and social-spiritual values are conceptualised and cultivated in the documented frameworks of sports higher education in China and the Kyrgyz Republic.

Method: A qualitative comparative document analysis followed Bereday's stages of description, interpretation, juxtaposition and comparison. A documented search identified 28 documents (policy instruments, laws, regulations, institutional and heritage sources and scholarly studies, 2010–2025), which are listed in Appendix 1 and were coded against an a priori three-domain framework with an emergent second cycle.

Findings: The documents of both systems described the graduate as a moral exemplar rather than a technician but differed in mechanisms. Chinese documents pursued value formation through mandated curriculum instruments and a regulated practicum; Kyrgyz sources located it in education law and national heritage, within standards-led reform under documented resource constraint. No document in either corpus specified resilience as a taught and assessed outcome. Because documents record intention rather than practice, and the Kyrgyz record was thinner, these contrasts are reported with their evidence base.

Conclusion: Resilience appears under-specified in the documented frameworks of both systems. A triadic cultivation model, in which four pedagogical levers act across all three domains, is proposed as a conceptual model; its feasibility, costs and effects require empirical evaluation.

Keywords: Health Promotion; Physical Education and Training; Resilience, Psychological; Spirituality; Professional Competence; Schools

INTRODUCTION

Schools are a principal setting for population-level health promotion among young people, and the World Health Organization Health Promoting Schools framework locates that work in three places at once: the taught curriculum, the ethos and environment of the institution, and its engagement with families and communities [1]. Physical education teachers stand at the intersection of all three. They deliver the curriculum component, they model the conduct that sets the ethos, and they frequently organise the sport and festival activity through which schools reach families. Evidence on school-based physical activity interventions indicates that curriculum content alone does not carry these programmes: effects are modest and variable, and implementation depends on the training, capability and engagement of the staff who deliver them [2-5]. In China, observational evidence likewise associates teachers' experience and in-lesson behaviour with how physically active pupils are during physical education lessons [6]. If that is so, the health promotion capacity of a school system depends, in part, on how its physical education teachers were prepared. That is the premise of this study.

Sport and physical culture occupy a prominent place in recent national policy in China, where they are framed as instruments of population health and national development [C1, C2], and the Kyrgyz Republic has promoted traditional sport internationally, hosting the first three World Nomad Games [K8]. Graduates of sports universities absorb the consequences directly. A physical education graduate is expected to teach a subject, coach, promote health, safeguard children and model the conduct that young people are meant to copy. Whether preparation programmes treat psychological and ethical formation as an object of design, or leave it as a by-product of participation in sport, is one of the questions this study addresses.

That narrow emphasis has not gone unchallenged. Kirk [7] argued that physical education remains trapped in a version of practice built around decontextualised sport techniques, which limits what any programme of teacher education can achieve. The competence literature moved in the same direction. Blömeke, Gustafsson and Shavelson [8] recast professional competence as a continuum running from underlying dispositions, through situation-specific perception and decision-making, to observable performance. On this view, a curriculum that certifies technical knowledge alone certifies only part of what the work demands.

In Press

Psychological resilience represents another area that has received relatively little attention in the preparation of physical education teachers. Students in this field may face a combination of demands that are not always present to the same extent in other programmes, including intensive physical training, injury and rehabilitation, competitive failure and the demands of the first teaching practicum. Sarkar and Fletcher [9] identified a range of stressors experienced by sport performers as well as factors that may help them cope with these pressures. Similarly, Fletcher and Sarkar [10], in their grounded theory study of Olympic champions, found that resilience develops through an interaction between psychological characteristics and the way individuals perceive and respond to the situations they encounter. In this sense, resilience cannot be understood simply as a personal characteristic; the surrounding environment also plays an important role. In general teacher education, evidence-informed frameworks for building resilience have been proposed [11], but none of the documents identified for this study set out a comparable framework for physical education teacher education in either of the systems studied.

A similar issue can be observed in relation to social and spiritual development. The assumption that participation in sport automatically contributes to character development has been questioned for many years. Shields and Bredemeier [12] concluded that participation in physical activity, by itself, does not necessarily lead to positive moral development and that some competitive environments may even have negative effects on moral reasoning. It is more likely to occur when learners are given opportunities to discuss, practise and reflect on values in a deliberate way. Fisher [13] provides a useful framework for understanding spiritual well-being through four domains: the relationship with oneself, relationships with others, relationships with the environment, and a relationship with a transcendent dimension. This framework can therefore be applied in contexts that are either secular or religious. In both countries, national documents assign value formation to education: in China explicitly to all university courses [C4], and in the Kyrgyz Republic to education in general [K3]. The traditions and cultural resources through which those values are expressed and transmitted differ.

Problem statement

The three areas of literature considered in this study have generally developed separately. Research on professional competence has focused largely on knowledge, performance and teacher effectiveness, while resilience has been examined mainly within sport psychology. Research on values, in contrast, has been associated more closely with moral development and the philosophy of education. The comparative literature presents an additional limitation: in our searches, English-language scholarship on sports higher education in Central Asia was sparse compared with that on China (Appendix 1). China and the Kyrgyz Republic provide a useful basis for comparison because each concentrates specialised sports higher education in a flagship sports university, Beijing Sport University and the Kyrgyz State Academy of Physical Culture and Sports [C13, K7], yet the two systems have operated under very different political and economic conditions since the early 1990s.

Purpose and research questions

The purpose of this study is to bring these three domains together and examine them within two contrasting national systems. The analysis was guided by three questions. First, how are professional competence, psychological resilience and social-spiritual values conceptualised in the policy documents and academic literature relating to sports higher education in China and the Kyrgyz Republic? Second, what pedagogical approaches do these documents describe for developing these areas? Third, what similarities and differences become apparent when the two systems are examined systematically, and which practices might be considered transferable without ignoring the social, institutional and cultural conditions in which they have developed?

Theoretical foundations

The analysis draws on four main bodies of theory.

Professional competence provides the starting point. Shulman [14] introduced the concept of pedagogical content knowledge to distinguish the knowledge required for effective teaching from knowledge of a subject itself. This distinction is particularly relevant to physical education, where practical skill in a sport does not necessarily mean that an individual is equally prepared to teach that activity effectively. Blömeke et al. [8] supplied the structural model used throughout this study: competence as a continuum from disposition, to situation-specific skill, to performance. Korthagen [15] extended the analysis inward, layering environment, behaviour and competencies over beliefs, professional identity and mission. That layering matters to the present argument, because it places values beneath competence as its directive core instead of beside it.

In Press

Resilience follows. Masten [16] located it in ordinary adaptive systems, not in exceptional individual endowment, which suggests that it is educable. Fletcher and Sarkar [17] addressed the confusion generated by treating resilience as trait, process and outcome at once, defining it by the mental processes and behaviours that protect individuals from the potential negative effects of stressors. Rutter [18] stressed how dynamic and situation-bound the capacity is. Ungar [19] went further, arguing that resilience depends on resources being both available in the environment and meaningful within the culture. It suggests that the factors that support a student in Bishkek may not be the same as those that support a student in Beijing, even when the students face similar pressures. Fletcher and Sarkar [20] developed this evidence into a practical training framework that considers the balance between challenge and support.

The third area concerns values and spirituality. Hellison [21] developed a widely used approach to physical activity that progresses through respect, effort, self-direction, concern for others and the application of these behaviours beyond the immediate sporting setting. Fisher's [13] four-domain model provides a way of examining spiritual well-being without requiring a particular religious position. Li [22] described the importance of virtue in learning within Confucian-influenced cultures, where qualities such as diligence, perseverance and moral self-development are regarded as integral parts of education.

The fourth theoretical strand brings the preceding perspectives together. Bronfenbrenner [23] understood human development as taking place within a set of interconnected social and environmental systems. This perspective is useful for distinguishing between influences that are directly controlled by universities, those shaped by national education policy, and those rooted more broadly in cultural traditions. Considered alongside Korthagen's [15] model of teacher development, it supports the working proposition of this study: professional competence, psychological resilience and social-spiritual values need not be treated as three separate educational outcomes, but can be understood as interconnected aspects of the formation of a physical education professional. In this framing, competence supplies the repertoire, resilience helps sustain that repertoire under adversity, and values give it direction. The proposition is theoretical; it organised the analysis and is not itself tested by it.

METHODS

Research design

The study used qualitative comparative document analysis, organised by the four-step model associated with Bereday [24]: description and interpretation conducted separately for each system, juxtaposition to establish a common frame, then comparison to generate analytical propositions. It suited research questions about system-level configurations of policy, curriculum and pedagogy, and completing interpretation before juxtaposition guards against reading one system through the other's categories. The units of comparison were the national systems of specialised sports higher education, with institutional documentation drawn mainly from the flagship institution in each (Beijing Sport University and the Kyrgyz State Academy of Physical Culture and Sports). The tertium comparationis, the common ground making the two cases commensurable, was the three-domain framework set out above.

Document search and selection

Documents were identified through four routes: (a) the official government, ministry and legal portals of each country (the Central People's Government of China, gov.cn; the Ministry of Education of China, moe.gov.cn; the General Administration of Sport of China, sport.gov.cn; and the Ministry of Justice legal database of the Kyrgyz Republic, cbd.minjust.gov.kg), searched in Chinese and Russian for national instruments on school physical education, teacher preparation, higher-education structure, accreditation, student mental health and value education; (b) the websites of the Kyrgyz State Academy of Physical Culture and Sports, the World Nomad Games and the National Erasmus+ Office in Kyrgyzstan; (c) the UNESCO Intangible Cultural Heritage lists; and (d) the English-language scholarly literature, searched by combining system terms (China, Chinese; Kyrgyzstan, Kyrgyz Republic, Central Asia) with sector terms (physical education teacher education, sports university, physical culture, higher education) and construct terms (competence, resilience, values, moral education, ideological and political education, practicum, counselling), supplemented by hand-searching the reference lists of included studies. Searches were limited to documents published between 2010 and 2025 or in force at the time of searching. The availability, wording and bibliographic details of every included document were verified against its official or publisher source on 17–18 October 2026, and the access date of each online document is given in Appendix 1.

In Press

Three criteria governed inclusion. A document had to be current or published between 2010 and 2025. It had to be either a governing instrument, meaning a national policy, a state educational or curriculum standard or an institutional programme or accreditation document, an intergovernmental designation bearing directly on one of the three domains, or a peer-reviewed empirical or conceptual study. And it had to engage substantively with sports or physical education higher education, or the national policy context governing it, in one of the two systems. Opinion pieces without evidence, promotional institutional material and studies concerned only with elite performance outcomes were excluded. Candidate documents were assessed against these criteria on their full text, and Figure 1 shows the number of documents included through each route. Counts of records screened and excluded before full-text assessment were not recorded, which we acknowledge as a limitation. Each included document is listed in Appendix 1 with its full citation, year, source type, country, language, evidence type and the domains to which it contributed, and is cited in the text by its Appendix 1 identifier (C1–C15 for China, K1–K13 for the Kyrgyz Republic). Theoretical and methodological works used to build the analytical framework, and background literature published before 2010, were not part of the corpus; they appear in the numbered reference list and are not counted in Table 1.

Stage	Route or step	Documents (n)
Identification	(a) National government, ministry and legal portals (gov.cn, moe.gov.cn, sport.gov.cn, cbd.minjust.gov.kg)	19 (China 13; Kyrgyz Republic 6)
	(b) Institutional and organisational websites (KSAPCS, World Nomad Games, National Erasmus+ Office in Kyrgyzstan)	3 (Kyrgyz Republic 3)
	(c) UNESCO Intangible Cultural Heritage lists	2 (Kyrgyz Republic 2)
	(d) Scholarly literature and hand-searching of reference lists	4 (China 2; Kyrgyz Republic 2)
Screening	Records screened and excluded before full-text assessment	Not recorded
Eligibility	Full texts assessed against the three inclusion criteria and verified against official or publisher sources (17–18 October 2026)	28 retained
Included	Analysed corpus (Appendix 1)	28 (China 15; Kyrgyz Republic 13; primary 23, secondary 5)

Figure 1. Document identification and inclusion by search route. Every included document was assessed on its full text against the inclusion criteria and verified against its official or publisher source on 17–18 October 2026; counts correspond to Appendix 1. Records excluded before full-text assessment were not counted.

Table 1. Composition of the analysed corpus by document type and system (each document counted once)

Document type	China	Kyrgyz Republic	Total
National policy instruments, laws and strategies	6	3	9
Curriculum, teacher-education, qualification and accreditation regulations	6	3	9
Institutional and heritage-event sources	1	2	3
Intergovernmental heritage designations	0	2	2
Peer-reviewed studies and scholarly reports	2	3	5
Total	15	13	28
of which primary evidence	13	10	23
of which secondary evidence	2	3	5

Note. Categories are mutually exclusive: each document was assigned to a single document type and to a single system according to the system it describes. "Primary" denotes official policy, standards, institutional and intergovernmental texts; "secondary" denotes peer-reviewed or scholarly studies that report on a system. Theoretical, methodological and international literature not specific to either

In Press

system informed the analytical framework and is cited as background, but was not coded as evidence about either system and is not counted here. Full details are given in Appendix 1.

Analytical procedure

Analysis followed the four Bereday stages. Description reconstructed each system's governance structure, programme architecture, admission and certification arrangements and stated aims from primary documents. Interpretation then read each description against its own social, economic and political conditions, with close attention to how public financing diverged after the early 1990s. Juxtaposition arrayed the two interpreted descriptions against the three-domain framework in a matrix, every cell recording conceptualisation, pedagogical mechanism and assessment arrangement for one domain in one system. Comparison converted patterned similarities and differences into analytical propositions, each then checked against the corpus for disconfirming evidence.

Coding ran in two cycles. The first cycle applied eleven a priori sub-codes derived from the theoretical framework: for each of the three domains, its conceptualisation, its pedagogical mechanism and its assessment arrangement (nine sub-codes), plus two contextual sub-codes for governance and financing, and for resourcing constraints (the full codebook, with definitions and decision rules, is given in Appendix 2). The second cycle was emergent: passages relevant to the research questions that did not fit any a priori sub-code were assigned descriptive codes, which were then grouped into system-specific categories (for example, heritage-based moral pedagogy in the Kyrgyz sources). Each coded passage was also tagged by evidence status: a documented policy intention (what a governing document requires or proposes), a reported institutional practice (what a source independent of the governing document reports as occurring), or the authors' analytical interpretation. Chinese documents were coded by Y.Y. with C.W., Kyrgyz documents by B.S., and peer-reviewed studies by Z.L. Coding decisions and disagreements were discussed among the authors until agreement was reached, and G.K., as supervising author, reviewed the coding. No inter-coder reliability statistic was calculated, consistent with the interpretive aims of document analysis. Coding was conducted manually using a structured matrix.

Trustworthiness and reflexivity

Bowen [25] warned that documents are written for purposes other than research, so they evidence official intention far better than enacted practice. Three procedures answered that warning. Source triangulation required any claim about practice to be corroborated by a source type independent of the governing documents, ordinarily a peer-reviewed study; where no such source existed, the claim is reported as a documented intention only. An audit trail recorded every coding decision beside the passage supporting it, and was reviewed by G.K., the supervising author. Negative-case analysis was applied at the comparative stage, each proposition tested against evidence that would contradict it. Reflexivity was needed most on the asymmetry between the cases. Internationally accessible literature on the Chinese system is far more plentiful, so where the Kyrgyz corpus was silent on a provision we report the absence of documentation, not the absence of the provision.

We also sought to avoid presenting the Kyrgyz system mainly in terms of what it lacks relative to the better-resourced Chinese system. Regarding language, Chinese-language documents were read in the original by the Chinese-speaking authors, and Russian-language legal texts were read in the original Russian; key provisions of every primary document were checked against the official text during verification. The language of each document is recorded in Appendix 1; translation of quoted provisions into English may have affected some nuance.

FINDINGS

The findings follow the Bereday stages. Throughout, documented policy intentions, reported institutional practices and our analytical interpretations are distinguished (see Methods); the documents supporting each main contrast are summarised in Table 3.

The Chinese system: description and interpretation

Chinese sports higher education is organised around specialised sports universities, among them Beijing Sport University, a public institution directly affiliated to the General Administration of Sport of China [C13], alongside physical education faculties in normal and comprehensive universities. Across the period examined, a dense sequence of national instruments addressed school sport and the preparation of its teachers. The Outline for Building a Leading Sports Nation [C2] set goals to 2035 and 2050 organised around five strategic tasks: national fitness, competitive sport, the sports industry, sports culture, and sports exchange with other countries and regions. The Opinions on Comprehensively Strengthening and Improving School Physical Education in the New Era [C3] required schools to provide the full prescribed physical education curriculum, encouraged schools at

the basic-education stage to offer one physical education lesson every day, and called for schools to be fully staffed with physical education teachers and for reform of the training model for university physical education majors. The 2022 compulsory education curriculum plan allocated 10–11% of total instructional time over the nine years to physical education and health, a share exceeded only by Chinese (20–22%) and mathematics (13–15%) [C11], with content specified in revised curriculum standards [C12]. The Healthy China 2030 outline specified that health education be included in physical education teachers' pre-service and in-service training [C1]. All of these are documented intentions.

Our interpretation is that this expansion was driven less by pedagogical considerations than by health and national-development goals: the documents themselves link school sport to the Healthy China agenda and to building a leading sports nation [C1, C2]. Rapid transmission through a hierarchical system is not, however, the same as change in practice. Jin [C14] reported that teachers' readings of successive reforms departed from central intention, and Meng et al. [C15], interviewing physical education teachers in northern China about the "Health First" reform, reported that teachers were uncertain how to reorient their practice and that contextual factors, notably the physical education examination, shaped what they prioritised. These studies concern school curriculum reform rather than teacher education directly, but they caution against reading national documents as descriptions of practice.

The Kyrgyz system: description and interpretation

Specialised sports education in the Kyrgyz Republic is centred on the Kyrgyz State Academy of Physical Culture and Sports in Bishkek, which dates its history from 1955 [K7]. Bachelor's and master's programmes are offered in the higher-education direction "Physical culture and sport" (532000) established in the national list of degree directions [K4]. Following independence in 1991, the higher education sector experienced difficulties reported more broadly across post-socialist Central Asia. Shadymanova and Amsler [K11] report that, as the public budget for higher education was reduced, institutions came to depend on recruiting fee-paying students, with state-funded places covering about one fifth of full-time students; a 2023 sector profile reports that fee income accounts for more than 80% of university expenditure and, summarising the national education programme, lists an obsolete material and technical base among the sector's problems [K13]. Chapman et al. [26], in a study of five Central Asian countries, reported that national strategies to improve educational quality were constrained mainly by finance rather than by a lack of formal policy commitment. These are reported conditions for the sector as a whole; the corpus contained no study of their specific effects on physical education teacher preparation.

The subsequent reform process aligned the degree structure with the Bologna cycles [K13]. Government Decree No. 496 of 2011 introduced a two-level (bachelor–master) structure from the 2012–2013 academic year, with programme volume expressed in credit units (240 credits for a bachelor's degree) [K4]. Independent accreditation by recognised agencies, distinguishing institutional from programme accreditation, was introduced by Government Decree No. 670 of 2015 [K5] and is now governed by the Law on Education of 2023 and Cabinet of Ministers Decree No. 246 of 2024 [K3, K6]. The transition illustrates a gap between reform and implementing capacity: Merrill [K12] reported that after the ministry's licensing and attestation division was abolished in June 2014, no formal system for evaluating universities operated while the rules for independent accreditation awaited approval. Longer-term policy documents set national development goals to 2040 [K1, K2]. The Programme for the Development of Education reports that teachers' salaries in the Kyrgyz Republic are about one third of the average in the Eurasian Economic Union countries, identifies a risk of outflow of teaching staff, and notes that 12% of children have at least one parent working abroad as a labour migrant [K2]. These figures concern school teachers, that is, the profession for which physical education programmes prepare graduates, and suggest that recruitment into and retention in teaching is a documented policy concern.

Whether these conditions affect physical education teacher preparation specifically could not be established from the corpus; we suggest, as a hypothesis for empirical study rather than a finding, that staff-intensive components such as supervised practicum would be particularly sensitive to them.

Juxtaposition: professional competencies

The governing documents of both systems define the graduate mainly through teaching and coaching ability. The density of documentation differed markedly. Chinese national documents codify competence through a nationally unified teacher qualification examination [C7], require pre-service

teachers to complete cumulative educational practice of not less than one semester [C8], embed the same requirement in the accreditation standards for teacher-education programmes [C9], and use a national basic-skills competition for physical education students, which the Ministry of Education describes as a means of evaluating physical education programmes [C10]. These are documented intentions; we located no independent study reporting how they are enacted in sports universities. For the Kyrgyz Republic, the accessible national framework specifies the degree structure, credit volume and accreditation arrangements [K4, K6], but the direction-specific state educational standard for "Physical culture and sport" was not publicly accessible, and we located no document specifying practicum duration or the assessment of teaching performance for physical education students. The contrast is therefore between a densely documented Chinese competence framework and a Kyrgyz framework whose programme-level detail could not be established from accessible sources; it should not be read as evidence that Kyrgyz programmes lack such arrangements.

Read against the competence continuum of Blömeke et al. [8], the assessment instruments described in the Chinese documents, namely written examination and demonstration of teaching, address the dispositional and performance ends of the continuum. We located no document in either corpus specifying assessment of the intermediate band of situation-specific perception and decision-making. This is an analytical interpretation of documented assessment arrangements, not an observation of practice.

Juxtaposition: psychological resilience

No document in either corpus specified psychological resilience as a taught and assessed learning outcome of physical education teacher preparation. Both systems' documents describe activities likely to expose students to adversity, such as competitive sport, selection and practicum, but none treats resilience as an object of curriculum design. The framing of adversity in the documents differed. The Chinese guidelines on curriculum-based ideological and political education ask physical education courses to foster tenacity and a spirit of striving, alongside patriotic and traditional-culture education [C4], a framing consistent with the virtue-oriented conception of learning outlined by Li [22]. In the Kyrgyz sources, the main resources bearing on endurance and conduct were heritage forms: UNESCO's description of the Manas trilogy notes that its storytellers provide moral and spiritual support to communities in times of conflict or disaster [K9], and kok boru is a traditional horse game [K10]; we located no Kyrgyz policy text framing student adversity explicitly, so the characterisation of a Kyrgyz framing of hardship remains tentative.

Provision for student support differed in its documentation. Chinese national policy requires every university to offer a compulsory mental-health course of, in principle, two credits and 32–36 class hours, and to employ full-time mental-health education teachers at a ratio of no less than 1:4000 students [C5, C6]. These are documented requirements; the corpus contained no evidence on their enactment in sports universities. The Kyrgyz Law on Education refers to the psychological safety of the learning environment and to psychological-pedagogical support for learners with special educational needs, but does not provide for psychological services in higher education [K3], and we located no study of student counselling or sport psychology services in Kyrgyz universities; this is an absence in the accessible record and does not establish an absence of provision. In neither corpus was general student support linked to the learning outcomes or assessment of physical education teacher preparation. Interpreted through Fletcher and Sarkar's [20] challenge–support framework, the documentary pattern in both systems specifies challenge more fully than support, a configuration the framework associates with an unrelenting rather than a facilitative environment. Whether students actually experience their programmes in this way cannot be determined from documents.

Juxtaposition: social-spiritual values

Value formation is assigned to education in the national documents of both systems, but the documented routes differ. In China, the 2020 guidelines require ideological and political education to be integrated into all university courses rather than confined to separate modules, and specify that physical education courses should establish a "health first" philosophy, emphasise patriotic and traditional-culture education, and cultivate tenacity and a sense of responsibility for the nation's physical fitness [C4]. In the Kyrgyz Republic, the documented resources are national cultural heritage: the Manas epic trilogy, inscribed by UNESCO on the Representative List of the Intangible Cultural Heritage of Humanity in 2013 [K9]; kok boru, inscribed in 2017 [K10]; and the World Nomad Games, a multi-sport event of traditional and nomadic sports first held in Kyrgyzstan in 2014 and hosted there again in 2016 and 2018 [K8]. At the level of national law, the Law on Education of 2023 states that education aims at the all-round development of a person who recognises universal and

national values, and requires teachers to instil respect for values including kindness, diligence, humanism, patriotism and justice [K3]; these provisions apply to education generally, and the article on higher education is framed in terms of professional and social-personal competences. UNESCO's description of the Manas trilogy also notes its role in giving young people a sense of identity and, within formal education, in promoting tolerance and multiculturalism [K9]. The corpus did not contain evidence on how, or how far, these heritage resources are used within the curricula of physical education teacher preparation; the Kyrgyz heritage route is therefore documented at the level of national cultural recognition rather than of programme provision.

Read through Fisher's [13] four domains, our interpretation is that the documented emphases diverge. The Chinese documents address mainly the communal domain, through relationship to the collective and nation, and the personal domain, through self-discipline and tenacity. The Kyrgyz heritage resources, as described in the UNESCO and Games sources, combine the communal domain with a register of meaning larger than the individual and, through equestrian and pastoral traditions, the environmental domain. No document in either corpus specified the assessment of value outcomes. Shields and Bredemeier [12] suggest that exposure and exhortation alone are insufficient. Table 2 sets the three domains side by side and marks the evidence status of each entry, and Table 3 shows the documentary basis of the main contrasts.

Table 2. Juxtaposition of the three domains across the two systems, with the evidence status of each entry

Dimension	Chinese sports higher education	Kyrgyz sports higher education
Governing logic	Centrally directed sequence of national instruments [C1-C3] [DI]	Standards-led reform (two-level degrees, credits, independent accreditation) under documented resource constraint [K2, K4-K6] [DI]
Competence conception	Codified through national qualification examination and programme accreditation [C7, C9] [DI]	Degree structure and credit volume specified; direction-specific standard not accessible [K4] [DI; gap]
Principal competence mechanism	Regulated practicum of at least one semester; national skills competition [C8, C10] [DI]	Not documented in accessible sources [gap]
Resilience conception	Implicit: tenacity and striving as course aims [C4] [DI]; hardship as virtue [AI]	Implicit: endurance within heritage narratives [K9] [AI, tentative]
Student support provision	Compulsory mental-health course; 1:4000 mental-health teacher ratio [C5, C6] [DI]	Psychological safety in education law; no provision for HE psychological services [K3] [DI]; no study located [gap]
Values conception	Curriculum-embedded ideological, patriotic and traditional-culture education [C4] [DI]	Universal and national values in education law [K3] [DI]; heritage resources: Manas, kok boru, World Nomad Games [K8-K10] [DI at national level]
Principal values mechanism	Integration of value content across all courses [C4] [DI]	Use within teacher-preparation curricula not documented [gap]
Assessment of values and resilience	No assessment arrangements located [gap]	No assessment arrangements located [gap]
Principal constraint	Gap between mandated and enacted curriculum [C14, C15] [RP, school level]	Gap between adopted reforms and implementing capacity [K2, K12, K13] [RP/DI, sector level]

Note. DI = documented policy intention; RP = reported practice (independent source); AI = authors' analytical interpretation; gap = no relevant document located in the corpus (absence of documentation, not evidence of absence of provision). Square brackets give reference numbers or Appendix 1 document identifiers.

In Press

Table 3. Comparative evidence matrix: documentary basis of the main China–Kyrgyzstan contrasts

Main contrast	China: supporting documents (n, type)	Kyrgyz Republic: supporting documents (n, type)	Evidence status and confidence
1. Governance: central policy cascade vs standards-led reform under constraint	4 national instruments [C1-C3, C11]	5 policy/regulation [K1, K2, K4-K6]; 2 studies/reports, sector level [K11, K13]	DI in both; RP for Kyrgyz funding conditions (sector level). Moderate
2. Codified competence and regulated practicum (China) vs undocumented programme detail (Kyrgyz)	4 regulations [C7-C10]	0 programme-level documents; 2 framework regulations [K4, K6]	DI (China); gap (Kyrgyz). Contrast is in documentation, not necessarily in provision. Low for Kyrgyz side
3. Resilience not an assessed outcome in either system	0 documents specifying resilience outcomes among 15 Chinese documents	0 documents specifying resilience outcomes among 13 Kyrgyz documents	Absence in corpus (both). Moderate for China, low for Kyrgyz side
4. Documented student mental-health provision (China) vs none located (Kyrgyz)	2 policy [C5, C6]	1 law (psychological safety only) [K3]	DI (China); gap (Kyrgyz). Enactment not documented in either
5. Curriculum-embedded values (China) vs values in education law and heritage resources (Kyrgyz)	1 policy with PE-specific clause [C4]	1 law [K3]; 3 heritage sources [K8-K10]	DI at national level; use in teacher preparation not documented in either. Moderate (China), low (Kyrgyz)
6. No assessment of value outcomes in either system	0 documents specifying value assessment	0 documents specifying value assessment	Absence in corpus (both). Low to moderate
7. Implementation gap (China) vs capacity gap (Kyrgyz)	2 studies, school level [C14, C15]	1 policy [K2]; 2 studies/reports [K12, K13]	RP for China (school curriculum, not teacher education); DI/RP for Kyrgyz (sector level). Moderate

Note. n = number of documents in the analysed corpus (Appendix 1) supporting the China or Kyrgyz side of each contrast. Confidence reflects the number, type and independence of supporting sources and whether the claim rests on documented absence.

Pedagogical strategies described in the documents

Comparing what the documents describe as being done, rather than what they declare as aims, four categories recurred. Direct instruction in professional knowledge was the strategy most consistently linked to assessment, through examinations and qualification requirements [C7]. Structured participation, covering practicum, competition and organised festival or heritage activity, was the main documented vehicle for experiences relevant to resilience and values [C8, C10, K8]. Narrative and ritual supplied an affective, identity-forming dimension: patriotic and traditional-culture content in the Chinese guidelines [C4] and epic and heritage performance in the Kyrgyz sources [K9]. Modelling by teacher educators and coaches is likely to be influential in both systems, but it was not described in the documents and its effects could not be assessed. Reflection, meaning the structured examination of experience, was rarely specified in either corpus. Given the weight that Korthagen [15] and Hellison [21] place on reflection, this documentary silence is notable, although it does not show that reflection is absent from practice.

In Press

DISCUSSION

Convergence of aims and divergence of mechanism

In the documents analysed, the two systems converged on their description of the graduate and differed on the means of producing one. Both go beyond a purely technical definition of the professional and assign education a role in moral formation [C4, K3]. China draws on state capacity expressed through a dense sequence of national instruments; the Kyrgyz Republic draws on education law and cultural heritage, within standards-led reform under documented financial constraint. Read through Bronfenbrenner [23], we interpret the divergence as lying mainly at the exosystem level, in governance and financing arrangements; because the corpus contains little evidence on the values held by teacher educators themselves, this interpretation remains tentative. If it holds, what might travel between the systems is the design of mechanisms rather than aims.

Resilience as an under-specified domain in both systems

No document in either corpus specified resilience as a taught or assessed outcome, although both describe activities likely to expose students to adversity; whether graduates are in fact resilient cannot be determined from documents. If the documentary pattern reflects practice, two concerns follow. Ethically, where adversity functions as a filter rather than as a supported learning experience, its costs fall on those who do not pass through it, and the stressors documented among sport performers [9] suggest that these costs may not be trivial. Theoretically, if resilience grows out of ordinary adaptive systems [16] and depends on resources being available and meaningful [19], it is in principle educable. Fletcher and Sarkar's [20] challenge–support framework points to the support side: mentoring, structured debriefing after competitive and practicum setbacks, and explicit instruction in appraisal and recovery. Frameworks of this kind exist in general teacher education [11]; their adaptation to physical education teacher education in these two systems would need evaluation.

Two routes to value formation and their potential risks

Mandated integration and heritage anchoring can be read as two responses to the same task, each with characteristic risks. Mandated integration may invite performativity, with value content documented for inspection but not absorbed by students; this risk is consistent with the gaps between intended and enacted physical education curricula reported by Jin [C14] and Meng et al. [C15] for mainland China and by Ha et al. [27] for Hong Kong, although none of these studies examined value education specifically. Heritage anchoring may invite romanticisation of tradition. Whether heritage-based practices are equally accessible and meaningful to all students, for example across gender, ethnic and rural–urban lines, could not be examined from the corpus and is identified below as a question for further research. One instrument plausibly addresses both risks: structured reflection, which is intended to turn received content into examined commitment [15, 21]. In the documents analysed, structured reflection was rarely specified in either system.

A proposed triadic cultivation model

Setting the theoretical framework beside the comparative findings, we propose a triadic cultivation model in which four pedagogical levers address the three domains across a whole programme instead of within discrete modules. The model is a conceptual proposal derived from the analysis; it has not been implemented or empirically tested in either system. Figure 2 shows the proposed structural relationship between the domains and the levers, and Table 4 specifies how each lever is intended to act on each of the three domains.

In Press

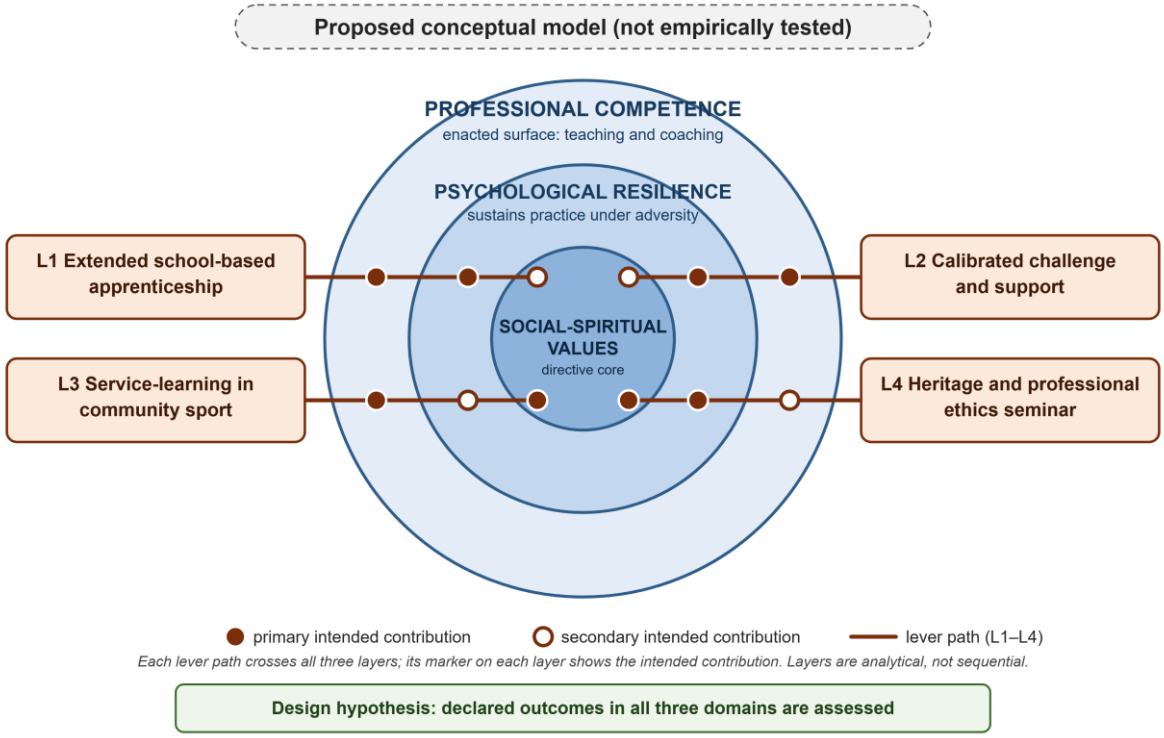


Figure 2. Proposed triadic cultivation model (conceptual; not empirically tested). Concentric layers show the three domains: values as the directive core, resilience as the sustaining layer and competence as the enacted surface. Each lever (L1–L4) is drawn as a path crossing all three layers because it is intended to act on every domain; the marker on each layer shows whether its intended contribution to that domain is primary (filled) or secondary (open), as specified in Table 4. The green box states the cross-cutting assessment principle, a design hypothesis.

Table 4. Proposed pedagogical levers and how each is intended to act on the three domains (design proposals, not evaluated practices)

Pedagogical lever	Design specification	Competence (C)	Resilience (R)	Values (V)
L1 Extended school-based apprenticeship	Early, progressive and mentored placement with trained cooperating teachers and jointly assessed teaching episodes	● Situated practice of teaching decisions in real school settings	● Graduated exposure to real classroom demands with mentor support	○ Encounters with pupils' needs prompt reflection on professional purpose
L2 Calibrated challenge and support	Deliberate pairing of demanding performance and teaching tasks with structured debriefing, appraisal instruction and recovery planning	● Debriefing targets situation-specific perception and decision-making	● Challenge matched with support, as in the challenge–support framework	○ Debriefing addresses fair play and conduct under pressure
L3 Service-learning in community sport	Credit-bearing placement delivering activity for under-served groups, including disability, rural and older adult provision	● Adapting activity for diverse groups extends the teaching repertoire	○ Working in unfamiliar settings builds coping and adaptability	● Service and concern for others enacted, with assessed reflection

Pedagogical lever	Design specification	Competence (C)	Resilience (R)	Values (V)
L4 Heritage and professional ethics seminar	Critical study of the moral traditions of the national sporting culture alongside contemporary professional codes and safeguarding obligations	○ Links ethical codes and safeguarding duties to professional conduct	● Heritage narratives of perseverance examined as resources for coping	● Inherited and professional values examined rather than assumed

Note. ● primary intended contribution; ○ secondary intended contribution. Entries describe intended mechanisms derived from the theoretical framework and the comparative analysis; none has been evaluated in the systems studied.

One principle holds the model together: what is declared should be assessed. In the documents analysed, neither system specified assessment arrangements for resilience or value outcomes, which may signal to students that these domains matter less than technical knowledge. We therefore advance, as a design hypothesis, that assessing the intermediate band of the competence continuum [8], through video-based analysis of teaching decisions, structured observation of practicum performance and reflective portfolios evidencing value reasoning, could address the competence, resilience and values domains together. Whether it does so, and at what cost, would need to be evaluated empirically, for example with the designs outlined under Directions for further research.

Reciprocal lesson-drawing

Phillips and Ochs [28] showed that policy borrowing fails where the conditions supporting a practice are left behind. With that caveat, Chinese programmes might consider whether heritage practice and community festivals could complement mandated curricular value content, and Kyrgyz programmes might consider explicit professional standards and practicum regulation, recognising that enforcing them requires supervisory capacity and funding. In both directions the transferable object is a design principle, not an instrument, and neither proposal has been tested.

Some elements of the model could build on existing activities: structuring the debriefing that already follows competition, attaching assessed reflection to festival and community activity, and extending existing portfolios to evidence of value reasoning. These changes are not cost-free; they require staff time, training of cooperating teachers and supervisors, and assessment workload, and their resource implications were not examined in this study.

Relevance beyond the two systems

The pairing examined here is specific, and the findings cannot be generalised to other systems from a two-case document analysis. The pattern identified, in which documents declare broad formative aims while specifying assessment mainly for technical knowledge, may nonetheless be worth examining in other systems that share the physical culture institute tradition. Methodologically, the Kyrgyz case was harder to document than the Chinese one, and treating that asymmetry as a property of the archive rather than of the system is essential in comparative work on under-represented systems.

Limitations

Six limitations qualify these findings and the conclusions drawn from them. First, document analysis evidences official intention far better than enacted practice; claims about what happens in classrooms, gymnasiums and placements are inferential and are made only where an independent source allowed, and no claim is made about graduate outcomes such as competence or resilience. Second, source availability was unequal: the Kyrgyz corpus was smaller and contained fewer independent studies of practice, so contrasts in which the Kyrgyz side rests on few documents (Table 3) are the least secure; in addition, records excluded before full-text assessment were not counted, so the selection process cannot be fully reproduced. Third, some Chinese- and Russian-language sources were read through translations or English-language scholarship, and nuance may have been lost. Fourth, institutional documentation came mainly from one flagship institution in each country, which may not represent the physical education faculties of other universities. Fifth, the two systems are not matched on scale, population or expenditure, so the comparison identifies contrasts of configuration and not of effectiveness. Finally, the people best placed to say how these arrangements are experienced, namely students and teacher educators, were not heard from directly.

In Press

Directions for further research

Three lines follow directly. A cross-national survey using established instruments, among them the Connor-Davidson Resilience Scale [29] or the Brief Resilience Scale [30], together with validated competence measures, would establish whether the configurational differences described here are reflected in student outcomes. Longitudinal and interview-based studies of students and teacher educators in both systems would establish how the documented arrangements are enacted, including practicum supervision and student support. Pilot implementations of one or more levers of the proposed model, evaluated with mixed methods and costed, would test its feasibility. Qualitative studies including the voices of women and of students from ethnic minority and rural backgrounds would examine whether heritage-anchored value formation is equally accessible and meaningful across student groups.

CONCLUSION

This study asked how professional competence, psychological resilience and social-spiritual values are conceptualised and cultivated in the documented frameworks of Chinese and Kyrgyz sports higher education. Within the limits of a document analysis, the comparison found that both systems describe the graduate as a moral exemplar, but pursue that aim by different documented means: centrally directed policy instruments in China, and inherited cultural practice alongside standards-led reform in the Kyrgyz Republic. It also found that no document in either corpus specified resilience as a taught and assessed outcome. Because documents record intention rather than practice, because the Kyrgyz record was thinner and partly accessed through translation, and because no graduate outcomes were examined, these conclusions describe documented configurations rather than what students experience or achieve. The triadic cultivation model is offered as a reasoned proposal: it suggests that existing experiences such as practicum, competition and community sport might be redesigned so that adversity is accompanied by support, heritage by reflection, and technical accomplishment by an examined professional purpose. Its value for the health promotion role of physical education teachers remains to be tested empirically.

In Press