Professional identity formation in sports teachers: a multifactorial analysis
Formación de la identidad profesional en docentes deportivos: un análisis multifactorial

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Abstract

Introduction: The modern sports education system is undergoing a significant transformation due to global changes in sports and new requirements for the training of young athletes.
Objective: This study aims to identify key factors influencing the professional identity of teachers working with young athletes, including their personal sports experience, continuous professional development (internships, courses, competitions), institutional specifics, and student achievement levels.
Methodology: A mixed-method cross-sectional study, with a quantitative emphasis, was conducted using an adapted Coach Identity Development Scale. The scale assessed six components: social and personal development, social recognition, life coaching, training, success, and motivation. A supplementary questionnaire collected demographic and professional data.
Results: The results show the significant influence of the factors on forming teachers' professional identities and create the basis for a comprehensive analysis of their interaction. Discussion: Practical implications include recommendations for differentiated teacher training programs emphasizing life coaching competencies, institutional support structures, and evidence-based professional development frameworks aligned with international coaching standards.
Conclusions: Professional identity formation is driven by experiential, institutional, and developmental factors, necessitating differentiated training, systemic reforms and longitudinal research.

Keywords

Continuous professional development; coaching effectiveness; pedagogical assessment; Coach Identity Development Scale (CIDS).

Resumen

Introducción: El sistema moderno de educación deportiva está experimentando una transformación significativa debido a los cambios globales en el deporte y los nuevos requisitos para la formación de jóvenes atletas.
Objetivo: Este estudio tiene como objetivo identificar los factores clave que influyen en la identidad profesional de los docentes que trabajan con jóvenes atletas, incluyendo su experiencia deportiva personal, el desarrollo profesional continuo (pasantías, cursos, competencias), las características institucionales y los niveles de rendimiento estudiantil.
Metodología: Se realizó un estudio transversal de métodos mixtos, con énfasis cuantitativo, utilizando una versión adaptada de la Escala de Desarrollo de Identidad del Entrenador. La escala evaluó seis componentes: desarrollo social y personal, reconocimiento social, coaching vital, formación, éxito y motivación. Un cuestionario complementario recopiló datos demográficos y profesionales.
Resultados: Los resultados muestran la influencia significativa de estos factores en la formación de la identidad profesional de los docentes y crean las bases para un análisis integral de su interacción.
Discusión: Las implicaciones prácticas incluyen recomendaciones para programas diferenciados de formación docente que enfaticen competencias de coaching vital, estructuras de apoyo institucional y marcos de desarrollo profesional basados en evidencia y alineados con estándares internacionales.
Conclusiones: La formación de la identidad profesional está impulsada por factores experienciales, institucionales y de desarrollo, lo que hace necesaria una formación diferenciada, reformas sistémicas e investigación longitudinal.

Palabras clave

Desarrollo profesional continuo; eficacia del coaching; evaluación pedagógica; Escala de Desarrollo de la Identidad del Entrenador (EDIE).

Introduction

The modern sports education system is undergoing a significant transformation due to global changes in sports and new requirements for training young athletes. These changes are accompanied by persistent challenges that require careful consideration. Berdysheva et al. (2024), for instance, demonstrate how media portrayals of athletes—particularly the rhetorical framing of national identity—shape public perceptions of sports professionals, thereby indirectly influencing pedagogical priorities in coach training programs. The rapid shift to digital learning platforms during the COVID-19 pandemic, as highlighted by Haryanto et al. (2024), exposed systemic gaps in institutional support for sports educators. Their study found that teachers' ability to adapt to online physical education relied heavily on technological resources (e.g., video conferencing tools) and institutional training—factors that parallel our findings on how organizational culture (e.g., access to professional development) shapes professional identity. According to the International Council for Sports Science and Physical Education (ICSSPE), the quality of training for sports teachers is becoming a key factor in the development of youth sports (ICSSPE & UNESCO, 2015). The International Association for Physical Education in Higher Education (AIESEP) notes that a modern sports teacher should possess technical and methodological competencies and a well-formed professional identity. This identity determines the nature of interaction with students, the ability to make professionally informed decisions, and the degree of commitment to the profession (Dokuchayeva et al., 2024), which together make it possible to solve diverse pedagogical problems effectively (AIESEP, 2020; Olmedo Falconí et al., 2025). The International Olympic Committee, in its strategy for the development of youth sports, emphasizes the need to form a holistic professional identity of coaches and teachers as the basis for their effective teaching activities (Armstrong, 2018; Dokuchayeva et al., 2024).

Milistetd et al. (2018) emphasize the importance of a narrative and collaborative approach in the development of the professional identity of sports teachers, which correlates with current trends in sports pedagogy. This approach allows one to integrate the teacher's personal experience with professional requirements and create individual professional development trajectories (Palacios et al., 2024; Ulupınar & Özbay, 2020). The International Council for Coaching Excellence (ICCE) (2017) emphasizes the importance of integrating pedagogical and athletic competencies in the professional development of a coach.

The process of forming the professional identity of a sports teacher has significant differences from the formation of the identity of general education teachers (Hajebi & Bälter, 2024), which is due to the specifics of sports activities and special requirements for the competencies of a coach-instructor (Aygün, 2021; Blackett et al., 2017).

In this study, we proceeded from an understanding of the specifics of the professional identity of coaches presented in the study by Pope et al. (2014), which analyzed the process of identifying coaches with their professional roles through the prism of role identity theory. The authors demonstrated that the professional identity of a coach is formed through the interaction of three key components: cognitive (understanding the role of a coach), emotional (attitude to coaching), and behavioral (implementation of the role in practice). The further development of these ideas was reflected in the study by Rout (2021) which developed and validated the Coach Identity Development Scale (CIDS).

This theoretical basis is especially important for our study, as it allows a structured approach to the analysis of factors influencing the professional identity of teachers working with young athletes.

Our study focused on the influence of the following factors: personal sports experience, continuous learning system, educational institution (organizational culture and traditions), and students' athletic achievements.

Modern research shows that the coach's sports experience significantly influences their professional identity. Purdy & Potrac (2016) note that former athletes who become coaches often face the need to

transform their identity from an "athlete" to a "teacher," which can be accompanied by professional crises.

Continuous professional development is particularly important in forming professional identity (Almajnuni & Alwerthan, 2024). Research by Duarte and Culver (2014) shows that the prospect of life-long learning is critically important for the professional growth of sports teachers. This provision is re-flected in the recommendations of the European Network of Sport Education (ENSE), which emphasizes the need to create systems to support the professional development of coaches throughout their careers (European Commission - Public Health, n.d.).

Institutional factors also play a significant role in forming teachers' professional identity (Tohani et al., 2024). The specifics of an educational institution, its organizational culture, and its traditions can sig-nificantly influence the professional development of a teacher (Mallett & Coulter, 2016). In its recom-mendations on the development of sports education, the European Commission notes the need to create a supportive institutional environment for the professional development of coaches (Aslakhanov et al., 2024; European Commission, 2012).

Student success is also important in forming a coach-instructor's professional self-awareness (Akishina et al., 2022). Townsend & Cushion (2017) show that students' achievements affect the teacher's self-esteem and ideas about professional effectiveness. As noted in the recommendations of the Interna-tional Olympic Committee, it is important to maintain a balance between striving for high sporting re-sults and observing the principles of the safe development of young athletes (Bergeron et al., 2015).

An analysis of existing research and international documents shows the need for a comprehensive study of the factors influencing the professional identity of teachers coaching young athletes (Niehues et al., 2024; Ryabchikov et al., 2024). This research is particularly relevant in the context of the development of sports pedagogy in Kazakhstan, where there are several systemic problems. Sports teachers rely mainly on their subjective experience, do not use modern methodological and digital technologies enough, and there is a shortage of specialists in inclusive physical education (Popov et al., 2024; Soloveva & Sokolova, 2023). There is some concern about unacceptable methods of influencing young athletes, which indicates the need to develop a deeper understanding of professional identity among sports teachers. This determined the purpose of this study: to identify key factors influencing the pro-fessional identity of teachers working with young athletes, considering the personal sports experience of the teacher, the system of continuous professional development (including internships, advanced training courses, and professional competitions), the specifics of the educational institution, and stu-dents' achievements.

Methods

Based on the analysis of the theoretical base and methodological approaches, the following research hypotheses were formulated, reflecting the alleged patterns of formation of the professional identity of sports teachers. When formulating hypotheses, both the theoretical provisions of the Pope et al. (2014) concepts on the role identity of coaches and empirical data on the factors of the professional develop-ment of sports teachers were considered.

H0: The formation of the professional identity of teachers working with young athletes is not deter-mined by a complex of social and professional factors (experience, qualifications, institutional environ-ment).

H1: Personal sports experience is a significant factor ($p < 0.05$) that determines a higher level of devel-opment of a teacher's professional identity on the CIDS scale, especially in the components of social and personal development and life coaching.

H2: There is a statistically significant positive correlation ($r > 0.5$, $p < 0.05$) between the intensity of a teacher's participation in the system of continuous professional development and the level of formation of their professional identity in all components of the CIDS scale.

Study design

We conducted a mixed cross-sectional study with a predominance of quantitative methods. We chose this design due to the need to perform the following:

1. Comprehensive assessment of the current state of teachers' professional identity.

2. Identification of statistically significant relationships between the components of professional identity.

3. Determining the influence of key factors on professional identity.

Selection criteria

1. Inclusion: active teaching activity in sports (at least one year), a relevant education.

2. Exclusion: administrative position not directly working with students, lack of relevant education.

Table 1. Stratification of the sample (N=150)

Stratification criterion	Categories	Number (n)	Proportion (%)
Teaching experience	Up to 5 years	52	34.7
	5-15 years	56	37.3
	More than 15 years	42	28.0
Type of institution	Youth sports school (DYuSSh)	68	45.3
	Sports clubs	45	30.0
	General education schools	37	24.7
Personal sports experience	With experience	127	84.7
	No experience	23	15.3

Note: The stratification of the sample represents the various categories of sports teachers by key characteristics of professional activity.

Data collection methods

Comprehensive questionnaire

Questionnaire developed by us

It is designed to collect the respondents' demographic and professional characteristics. It includes 20 questions, structured in blocks (20).

Table 2. The structure of our research questionnaire

Thematic block	Number of questions	Type of questions	Measured parameters
Demographic data	3	Closed	Age, gender, education
Professional profile	6	Mixed	Years in profession, specialization, personal sports experience, type of institution, position, workload
Professional development system	4	Multiple choice	Frequency and forms of professional development, the use of digital technologies
Work efficiency	3	Combined	Level of students' achievements, the number of prize winners, and work with special needs children
Qualitative assessment	4	Open	Professional difficulties, success factors, conflict situations, motivation
Total	20		

Note: The questionnaire's structure provides a comprehensive collection of data on all aspects of the professional activities of sports teachers.

Adapted version of CIDS

The study used an adapted version of CIDS (Rout, 2021), which includes six main components:

1. Social and personal development evaluates the integration of the teacher's characteristics with their professional role ($\alpha = 0.83$).

2. Social recognition measures the degree of professional recognition from students, colleagues, and parents (α = 0.81).

3. Life coaching determines the teacher's ability to influence students' personal development (α = 0.85).

4. The coach's training evaluates the coach's involvement in professional development processes (α = 0.82).

5. The coach's success measures professional achievements and their subjective assessment (α = 0.84).

6. The coach's motivation determines internal incentives for professional growth (α = 0.86).

Note: The reliability indicators (Cronbach's α) for all components exceed the threshold value of 0.80, which confirms the high internal consistency of the adapted version of the scale.

The full text of the questionnaire with detailed statements is provided in the Appendix.

Professional development assessment

A system for quantifying the intensi ty of professional development was developed.

Table 3. Criteria for assessing teachers' professional development

Field of assessment	Parameters	Measurement criteria	Verification form
Advanced training courses	Program scope	At least 72 hours	Certificates
	Periodicity	At least once every 3 years	Licenses
	Institution level	International/National/Regional	Diplomas
Internships	Duration	Minimum 36 hours	Contracts
	Relevance of the program	Compliance with the profile	Reports
	Implementing the results	Practical application	Certificates
Methodological associa-tions	Regularity of participation	At least 4 times a year	Protocols
	Activity	Presentations and talks	Methodological developments
	Expert activity	Participation in expert examinations	Expert opinions
Digital technologies	Specialized software	Regularity of use	Digital portfolios
	Activity monitoring	Complexity of the application	Analytical reports
	Digital planning	Implementation efficiency	Lesson plans
Mentoring activities	Mentor status	Official appointment	Orders
	Work intensity	2+ sessions per month	Mentor's diaries
	Efficiency	Progress of the students	Results reports

Note: Assessment criteria were developed by the authors for this study to systematically evaluate professional development co mponents.

Study stages

The main stages of the study are shown in Figure 1.

Figure 1. Stages of the study
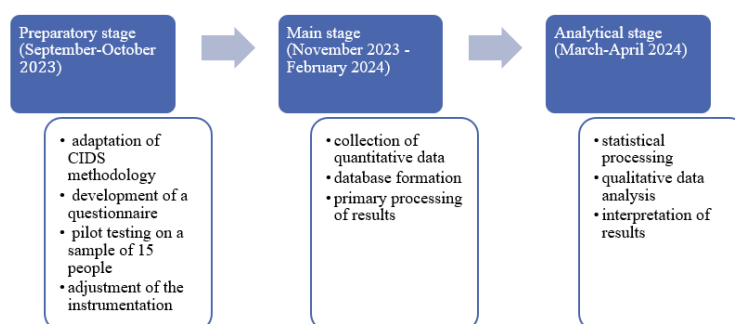
Statistical processing methods

The choice of statistical methods is based on modern approaches to data analysis in the social sciences (Field, 2013; Kashkin & Androsik, 2024; Kokkonos et al., 2025) and the specifics of research in sports pedagogy (Parker et al., 2024; Thomas et al., 2020).

1. Descriptive statistics:

• The use of medians and quartiles is explained by the ordinal nature of the CIDS scales (Rout, 2021).

• Frequency analysis is implemented according to the recommendations for categorical variables (Cohen et al., 2018).

2. Comparative analysis:

• The choice of nonparametric criteria is based on the results of checking the distribution of data (Siegel, 1956).

• The Mann-Whitney U-test was applied according to the recommendations for comparing two independent samples (Wilcoxon, 1945).

• The Kruskal-Wallis H-test is used for multiple comparisons (Kruskal & Wallis, 1952).

3. Correlation analysis:

• Spearman's rank correlation coefficient was chosen to consider the ordinal nature of the data (Spearman, 1987).

• The interpretation of the strength of correlations was carried out according to standard criteria (Cohen, 1988).

Statistical data processing was performed using IBM SPSS Statistics 26.0 software, the choice of which is justified by its wide application in social studies (Pallant, 2020).

Results

An analysis of the height of the professional identity components on the CIDS scale (Table 4) shows that the highest rates are observed for the life coaching (Mdn=4.4, Q1=4.0, Q3=4.8) and coach's motivation components (Mdn=4.3, Q1=3.9, Q3=4.7), which indicates the teachers' priority orientation toward the personal development of students and high internal motivation for professional activity.

Table 4. Professional identity indicators for sports teachers (N=150)

Professional identity component	Mdn	Q1	Q3	Min	Max
1. Social and personal development	4.2	3.8	4.6	2.4	5.0
2. Social recognition	3.9	3.4	4.3	2.1	5.0
3. Life coaching	4.4	4.0	4.8	2.8	5.0
4. Coach's training	4.1	3.6	4.5	2.2	5.0
5. Coach's success	3.8	3.2	4.2	1.9	5.0
6. Coach's motivation	4.3	3.9	4.7	2.5	5.0

Note: Dataset represents original empirical findings from this study;
Values represent: Mdn is the median, Q1 is the first quartile, Q3 is the third quartile, Min is the minimum value, and Max is the maximum value.

Lower values are noted for such components as a coach's success (Mdn=3.8, Q1=3.2, Q3=4.2) and social recognition (Mdn=3.9, Q1=3.4, Q3=4.3), which may indicate an imbalance between internal professional motivation and external assessment of teachers' professional achievements.

A comparative analysis using the Mann-Whitney U-test showed significant differences in professional identity indicators between groups with different sports experiences (Table 5).

Table 5. Comparison of performance in groups with different sports experiences

Component	With experience (n=127) Mdn[Q1;Q3]	No experience (n=23) Mdn[Q1;Q3]	U	p
Social and personal development	4.4[4.0;4.7]	3.8[3.4;4.2]	847.5	<0.001
Social recognition	4.1[3.7;4.5]	3.6[3.2;4.0]	892.0	<0.001
Life coaching	4.5[4.1;4.8]	4.0[3.6;4.4]	873.5	<0.001

Note: Dataset represents original empirical findings from this study.

The data analysis demonstrates statistically significant differences (p<0.001) between groups of teachers with and without sports experience in the components studied components of professional identity. The most significant differentiation is observed in indicators of social and personal development (U=847.5), where the median values for the group with experience (Mdn=4.4) significantly exceed the indicators of the group without experience (Mdn=3.8). This indicates that personal sports experience is a significant factor in forming a professional identity, especially regarding social and personal integration into the professional community.

Applying the Kruskal-Wallis test allowed us to establish significant differences in indicators of professional identity between groups with different work experiences (Table 6).

Table 6. The impact of work experience on professional identity

Component	up to 5 years (n=52) Mdn[Q1;Q3]	5-15 years (n=56) Mdn[Q1;Q3]	more than 15 years (n=42) Mdn[Q1;Q3]	H	p
Social and personal development	3.8[3.4;4.2]	4.2[3.8;4.6]	4.6[4.2;4.9]	35.42	<0.001
Life coaching	4.0[3.6;4.4]	4.4[4.0;4.8]	4.7[4.3;5.0]	31.54	<0.001
Coach's motivation	3.9[3.5;4.3]	4.3[3.9;4.7]	4.6[4.2;4.9]	28.76	<0.001

Note: Dataset represents original empirical findings from this study.

The results show a steady upward trend in professional identity indicators with increasing work experience (H=35.42, p<0.001). A particularly pronounced progression is observed in the component of social and personal development, where the median values increase from 3.8 in the group of recent graduates to 4.6 for teachers with more than 15 years of experience. The life coaching component also demonstrates significant positive dynamics (H=31.54, p<0.001), which indicates the development of pedagogical competencies with the accumulation of professional experience.

An analysis of the relationships between the professional identity components (Table 7) demonstrated significant positive correlations.

Table 7. Correlations between the components of professional identity (Spearman's ρ)

Components	1	2	3	4	5	6
1. Social and personal development	1.00					
2. Social recognition	0.62*	1.00				
3. Life coaching	0.58*	0.54*	1.00			
4. Coach's training	0.45*	0.48*	0.52*	1.00		
5. Coach's success	0.57*	0.65*	0.49*	0.43*	1.00	
6. Coach's motivation	0.61*	0.56*	0.63*	0.47*	0.59*	1.00

Note: *p < 0.001. Dataset represents original empirical findings from this study.

The correlation analysis showed strong positive relationships between all components of professional identity (p<0.001). The most pronounced correlations were found between social recognition and the coach's success (p=0.65) and between life coaching and the coach's motivation (p=0.63). These data indicate the interdependence of external assessment of professional achievements and internal motivation for professional development.

To assess the impact of the intensity of professional development on the components of professional identity, we applied the Kruskal-Wallis test, which showed statistically significant differences between the groups (Table 8).

Table 8. Indicators of professional identity depending on the intensity of professional development

Component	Regular (n=42) Mdn[Q1;Q3]	Periodic (n=68) Mdn[Q1;Q3]	Rare (n=40) Mdn[Q1;Q3]	H	p
Coach's training	4.6[4.2;4.9]	4.2[3.8;4.5]	3.7[3.3;4.1]	32.45	<0.001
Social and personal development	4.5[4.1;4.8]	4.1[3.7;4.4]	3.8[3.4;4.2]	28.76	<0.001
Coach's motivation	4.4[4.0;4.7]	4.0[3.6;4.3]	3.6[3.2;4.0]	27.82	<0.001

Note: Dataset represents original empirical findings from this study.

Statistical analysis demonstrates a significant differentiation of professional identity indicators depending on the intensity of professional development (p<0.001). The maximum variability is observed in the coach's training component (H=32.45), where the group with regular professional development demonstrates significantly higher indicators (Mdn=4.6) compared to the group with rare participation in professional development (Mdn=3.7). A similar trend can be traced in social and personal development components (H=28.76) and the coach's motivation (H=27.82). This confirms the system-forming role of continuous professional development in forming professional identity.

A comparative analysis using the same test showed statistically significant differences in indicators of professional identity between groups of teachers from different educational institutions (Table 9).

Table 9. The influence of the type of educational institution on professional identity

Component	DYuSSh (n=68) Mdn[Q1;Q3]	Sports clubs (n=45) Mdn[Q1;Q3]	General education schools (n=37) Mdn[Q1;Q3]	H	p
Social recognition	4.3[3.9;4.7]	4.1[3.7;4.5]	3.7[3.3;4.1]	24.52	<0.001
Coach's motivation	4.2[3.8;4.6]	4.4[4.0;4.8]	3.8[3.4;4.2]	23.18	<0.001
Coach's success	4.0[3.6;4.4]	3.9[3.5;4.3]	3.5[3.1;3.9]	22.45	<0.001

Note: Dataset represents original empirical findings from this study.

The analysis showed statistically significant differences in professional identity indicators between teachers working in different educational institutions (p<0.001). The most pronounced differentiation occurred in the social recognition component (H = 24.52), with DYuSSh teachers demonstrating significantly higher scores (Mdn = 4.3) than general education school teachers (Mdn = 3.7). The coach's motivation component shows maximum values for representatives of sports clubs (Mdn = 4.4), which may be due to the specifics of the organizational culture of these institutions and the professional motivation system.

To assess the impact of students' sports achievements on teachers' professional identity, we used the Kruskal-Wallis test which showed statistically significant differences between groups with different levels of achievement (Table 10).

Table 10. Indicators of professional identity depending on students' achievements

Component	International (n=28) Mdn[Q1;Q3]	National (n=45) Mdn[Q1;Q3]	Regional (n=77) Mdn[Q1;Q3]	H	p
Coach's success	4.7[4.3;4.9]	4.3[3.9;4.6]	3.9[3.5;4.2]	31.24	<0.001
Social recognition	4.5[4.1;4.8]	4.2[3.8;4.5]	3.8[3.4;4.1]	29.76	<0.001
Coach's motivation	4.6[4.2;4.8]	4.3[3.9;4.6]	4.0[3.6;4.3]	27.82	<0.001

Note: Dataset represents original empirical findings from this study.

The statistical analysis demonstrates a stable positive relationship between students' achievements and the indicators of teachers' professional identity (p<0.001). The maximum differentiation is observed in the coach's success component (H=31.24), where teachers who coach students at the international level demonstrate significantly higher indicators (Mdn = 4.7) compared with teachers working at the regional level (Mdn = 3.9). A similar trend can be traced in the components of social recognition (H=29.76) and coach motivation (H=27.82), which indicates the complex influence of students' athletic achievements on teachers' professional identity.

Discussion

The results allow us to consider the formation of the professional identity of sports teachers as a complex, multifactorial process. Unlike previous studies that focused on individual aspects of professional identity (Pope et al., 2014; Purdy & Potrac, 2016), our study provides a comprehensive analysis of the interaction of various factors.

Statistical analysis confirmed the hypothesis H_1 about the significant influence of personal sports experience on the level of professional identity (U=847.5, p<0.001), which is consistent with the theoretical positions of Purdy and Potrac (2016) on the transformation of sports identity into pedagogical and complements the conclusions of Blackett et al. (2017) about the importance of sports experience in a coach's professional development. Our data additionally show that this influence is most pronounced in social and personal development and life coaching. This may be explained by the fact that personal sports experience forms a deeper understanding of the psychological aspects of sports.

The hypothesis of a positive relationship between the intensity of professional development and the level of professional identity was also empirically confirmed (H=32.45, p<0.001), which develops Duarte and Culver's theoretical ideas (Duarte & Culver, 2014) about the importance of continuing education and aligns with the ICCE recommendations (International Council for Coaching Excellence, 2017) on the need for systematic professional development.

The emphasis on leadership-driven training programs (Padierna Cardona et al., 2022) aligns with our data showing higher identity scores in structured environments (e.g., DYuSSh teachers, Table 9), underscoring the role of organizational culture in identity formation.

The observed relationship between the components of professional identity (p=0.43-0.65, p<0.001) confirms the theoretical model of Pope et al (2014) on the interdependence of cognitive, emotional, and behavioral aspects of professional identification. The observed hierarchy of components with the dominance of life coaching (Mdn=4.4) and the coach's motivation (Mdn=4.3) corresponds to the modern ideas of AIESEP (2020) on the priority of the personal development function of sports pedagogy.

Practical conclusions

The observed influence of the intensity of professional development on all components of professional identity creates an empirical basis for modernizing the professional development system for sports educators. This conclusion is consistent with the recommendations of ENSE (European Commission - Public Health, n.d.) and confirms the theoretical positions of Milistetd et al. (2018) on the importance of the narrative and collaborative approach in developing professional identity. Specific recommendations based on empirical evidence include the following:

1. Implementation of differentiated professional development programs based on the presence/absence of sports experience, which corresponds to the principles of individualization proposed by Armstrong (2018).

2. Improving the status of international internships. International internships have a more significant impact on professional identity (Mdn=4.7) than regional forms of professional development (Mdn=3.9). This expands the understanding of the role of professional development described in the works of Duarte and Culver (2014) and indicates the need for a differentiated approach to organizing a professional development system.

3. Development of teachers' digital competence through the integration of modern technologies into professional activities, following ICCE recommendations (Fadeyev et al., 2023; International Council for Coaching Excellence, 2017; Jani & Celaj, 2024).

The need for systemic changes, which is consistent with the recommendations of the European Commission (2012) for the Development of Sports Education and includes the following:

• Unification of standards of professional activity for sports educators based on the principles set out in the UNESCO documents (UNESCO, 2015).

- Creation of a unified methodological support system conforming to international AIESEP standards (AIESEP, 2020).

- The development of professional communities for the exchange of experience confirms the conclusions of Townsend and Cushion (2017).

The results allow us to formulate scientifically based recommendations for inclusive physical education corresponding to the principles outlined by Bergeron et al. (2015) and include the following:

- The introduction of specialized modules in professional development programs based on international inclusive education standards.

- The creation of a mentoring system for working with children with special educational needs, which corresponds to the modern principles of inclusive sports education set out in the consensus statement of the International Olympic Committee for the Development of Youth Sports (Bergeron et al., 2015; Hutson & Hutson, 2023).

The observed differences in professional identity indicators between teachers working in different educational institutions are of particular interest in the context of institutional influence on professional development. Higher rates of social recognition in DYuSSh (Mdn=4.3) compared to general education schools (Mdn=3.7) may be related to differences in organizational culture and professional expectations, which is consistent with Mallett and Coulter's conclusions (Mallett & Coulter, 2016) about the role of the institutional environment.

The discovered relationship between the athletic achievements of students and the components of the coach's professional identity requires special attention. Unlike the Townsend and Cushion study (Townsend & Cushion, 2017), which focused on the direct impact of student success on coach self-esteem, our data show a more complex picture: high students' achievements are associated not only with the coach success component ($p=0.63$) but also significantly affect social recognition ($p=0.58$) and motivation ($p=0.51$).

The identified cumulative effect of professional development deserves special attention: teachers with regular participation in advanced training courses and internships demonstrate higher performance in all components of CIDS. This indicates the need for a systematic approach to professional development, which is especially relevant in the context of modern requirements for sports teachers (AIESEP, 2020; International Council for Coaching Excellence, 2017).

Conclusions

The study allowed us to establish the multi-component nature of the professional identity of sports teachers, determined by a complex of interrelated factors. We empirically confirmed that the formation of professional identity occurs through the integration of personal sports experience, a system of continuous professional development, the organizational culture of the institution, and the efficiency of teaching activities, expressed in students' achievements.

We identified methodological limitations, which must be considered when interpreting the results:

- The study's cross-sectional nature limits the possibilities of analyzing the dynamics of professional identity development.

- The regional specifics of the sample may influence the generalization of conclusions.

- The use of self-assessment techniques creates a risk of subjectivity in assessing professional identity.

- The absence of a longitudinal component limits the understanding of the cause-and-effect relationships between the factors under study.

Promising areas for further research may include:

1. Developing and validating tools for an objective assessment of the professional identity of sports teachers, considering Kazakhstan's cultural specifics.

2. Conducting a longitudinal study of the transformation of professional identity under the influence of various forms of professional development.

The results create a theoretical and methodological basis for improving the system of training and professional development for sports teachers in Kazakhstan. A promising area of further research is the longitudinal study of the transformation of professional identity components under the influence of various forms of professional development and the development of scientifically based professional support mechanisms for aspiring coaches.

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Appendixes

COMPREHENSIVE QUESTIONNAIRE
to study the professional identity of sports teachers
Part 1. Demographic data and professional profile
1.   Age: □ 18-30 □ 31-40 □ 41-50 □ 51-60 □ over 60
2.   Gender: □ M □ F
3.   Education: □ Secondary vocational □ Higher pedagogical □ Higher in physical education □ Other higher education □ Academic degree
4.   The type of sport you work in: _____
5.   Coaching experience: _____ years
6.   Personal sports experience:
o   Type of sport: _____
o   Duration of athletic career: _____ years
o   The highest achievement: _____
7.   Type of institution where you work: □ DYuSSh □ Sports club □ Private sports school □ Secondary school □ Other _____
8.   Position: □ Head Coach □ Coach-instructor □ Assistant Coach □ Other _____
9.   Number of working hours per week: _____
Part 2. Professional development
10.   How often do you take advanced training courses? □ Every six months □ Every year □ Every 3 years □ Less often □ Never
11.   What forms of professional development do you use? (several options can be checked) □ Advanced training courses □ Internships, Seminars/webinars □ Methodological associations □ Self-education □ Mentoring □ Other _____
12.   Do you use digital technologies in your work? □ Yes, regularly □ Sometimes □ Rarely □ Never
13.   If so, which ones? (several options can be checked) □ Video analysis □ Mobile applications □ Online platforms □ Social networks □ Other _____
Part 3. Work efficiency
14.   The highest level of competition for your students: □ International □ National □ Regional □ City □ My students do not participate in competitions
15.   Number of winners in the last 3 years:
o   International level _____
o   National level _____
o   Regional level _____
16.   Do you work with children with special educational needs? □ Yes, regularly □ Sometimes □ No
Part 4. CIDS (Coach Identity Development Scale)
Evaluate the degree of agreement with each statement: 1: completely disagree 2: rather disagree 3: difficult to answer 4: rather agree 5: completely agree
Social and personal development:
1.   My relationships with athletes are important to me and strengthen my identity as a coach.
2.   The more I learn from other experts (sports scientists, psychologists), the more I feel like a coach.
3.   I see myself as a coach, regardless of whether I get paid for it.
4.   My relationships with other coaches strengthen my professional identity.
5.   The experience gained through trial and error helps me feel like a coach.
6.   Overcoming difficulties in coaching gives me the feeling that I am a good coach.
7.   My relationship with my mentors strengthens my identity as a coach.
8.   I am very passionate about helping athletes achieve their goals.
9.   My experience as an athlete influences the way I train others.
Social recognition:
10. The recognition of my competence by athletes' parents strengthens my sense of self as a coach.
11. Recognition of my competence by athletes increases my confidence as a coach.
12. Recognition from other coaches makes me feel like I am a coach.
13. Influencing the development of athletes helps me see myself as a coach.
14. My relationship with the athletes' parents strengthens who I am as a coach.
15. My presence in the media and social media can strengthen my sense of self as a coach.

Life coaching:

16. Life skills training for athletes is just as important as sports skills training.

17. As a coach, it is important for me to teach athletes life skills.

18. Helping athletes grow and monitoring their development is satisfying.

19. My life is centered around coaching.

Coach's training:

20. The more I learn about coaching, the more I identify myself as a coach.

21. The more I learn from experienced coaches, the more I see myself as a coach.

Coach's success:

22. Training athletes to achieve their best results in competitions gives me the feeling that I am an effective coach.

23. My contribution to the success of athletes in competitions strengthens my sense of being a successful coach.

24. When coaching brings income, it helps me feel like a coach.

25. Being appointed coach of the national team strengthens my sense of being a successful coach.

Coach's motivation:

26. Coaching is one of the main commitments in my life.

27. I do not feel strongly committed to my coaching job.

28. I am very passionate about coaching.

Part 5. Open questions

17.   What difficulties do you experience in your professional activities?

18.   What helps you feel like a successful coach?

19.   How do you resolve conflict situations with your students?

20.   What motivates you to continue coaching?