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Enhancing the professional competence of physical education teachers through personality-oriented training: A competency-based approach to educational transformation

Yerik Stambekov*, Nurzhan Tolegenuly, Zhazira Stambekova, Suleimenova Adelina, Kozhamkulova Nazgul, Yeldana Yerzhanova

Abai Kazakh National Pedagogical University, Almaty, Republic of Kazakhstan.

* Correspondence: Yerik Stambekov; erik_stambekov@mail.ru

ABSTRACT

This article examined the impact of a personality-oriented, competency-based professional development program designed for in-service Physical Education (PE) teachers in Kazakhstan. Conducted by the National Center for Advanced Training "Orleu" between 2024 and 2025, the program engaged 150 teachers across five regions through a 72–80-hour modular training course. Grounded in constructivist learning theory, humanistic psychology, and competency-based education frameworks, the program aimed to enhance teachers' reflective capacity, pedagogical flexibility, and inclusive instructional strategies. Using a mixed-methods research design, the study combined pre- and post-training self-assessment scales, classroom observations, and reflective essays. Results demonstrated statistically significant improvements across all measured domains, particularly in reflective and adaptive thinking (Cohen's d=0.96). Qualitative data highlighted shifts in professional identity, renewed motivation, and increased empathy toward students. The findings suggest that personality-oriented training — emphasizing self-awareness, motivation, and professional autonomy — serves as a transformative mechanism in physical education reform. The study advocates for the institutionalization of such approaches within national teacher development systems and offers practical recommendations for scaling and adapting personalized, kinesthetic, and inclusive instructional models across school sports contexts.

KEYWORDS

Competency-Based Development; Personality-Oriented Training; Physical Education; Teacher Professional Competence; Reflective Practice

1. INTRODUCTION

The transformation of educational systems in the 21st century requires a rethinking of not only curricula and technologies, but fundamentally, of how teachers are trained and developed (Roomani et al., 2015; Bekesheva & Canapilov, 2024). Among various fields of education, physical education (PE) faces a unique challenge: it must reconcile the increasing emphasis on measurable learning outcomes with the deeply humanistic and motivational nature of physical and health-related development (Hardman & Green, 2011). In Kazakhstan and across Central Asia, the issue of improving the professional competence of PE teachers has become a strategic priority amid reforms toward competence-based and personality-oriented education models (Ministry of Education and Science of the Republic of Kazakhstan [MES RK], 2022).

Personality-oriented education — a pedagogical paradigm that places the learner's individual traits, needs, and self-actualization at the center of the learning process — is increasingly recognized as essential in fostering both student and teacher development (Zeer, 2003; Slobodchikov & Isaev, 2000). When applied to the training of educators themselves, particularly in-service teachers, personality-oriented approaches can catalyze not only technical skill acquisition but also motivational renewal, critical reflection, and professional identity development (Hattie, 2009; Klimov, 2010). For PE teachers, who operate at the intersection of pedagogy, psychology, and physiology, such development is especially vital (Kirk, 2010).

Kazakhstan's current state program for education development ["Bilimді Ұlt", 2021–2025] emphasizes the formation of functional competencies in teachers, including the ability to adapt to diverse student needs, integrate inclusive practices, and apply learner-centered methods (MES, 2021). However, evaluations of national teacher qualification programs — particularly for PE and sport specialists — show a gap between formal certification and practical, context-sensitive competence (OECD, 2018). This suggests that many PE teachers may hold general qualifications but lack the reflective, adaptive, and communicative skills demanded in contemporary classrooms.

To address this, the National Center for Professional Development "Orleu" initiated a targeted retraining program in 2024–2025 for PE teachers. The program spanned 72–80 hours and was designed around a personality-oriented, competency-based model. Its goal was not merely to update teachers' knowledge, but to reshape their professional identities and practices in line with contemporary pedagogical demands. A total of 150 in-service PE teachers from across Kazakhstan participated, representing a broad range of schools, experience levels, and regional contexts.

Globally, professional competence in education is increasingly understood not just as a set of skills or knowledge, but as a multidimensional construct encompassing cognitive, affective, and behavioral components (Shulman, 1987; Mulder, 2014). In the domain of PE, these dimensions intersect with personal health literacy, emotional intelligence, interpersonal skills, and pedagogical flexibility (Siedentop, 2002). Effective PE teachers must be able to manage class dynamics, motivate diverse learners, adapt instruction to physical limitations, and integrate values such as teamwork and discipline — all of which are highly dependent on the teacher's own personality structure and reflective capacity (Bailey et al., 2009). Despite the relevance of personality-oriented training, empirical studies examining its effect on PE teacher development remain limited, especially in post-Soviet contexts. Existing literature has largely focused on pre-service teacher training or has examined competence from a purely technical perspective (Aicinena, 2002; Casey & Kirk, 2020). There is a paucity of longitudinal, in-practice studies that link structured, personality-oriented interventions with measurable improvements in teacher competence.

The present study seeks to fill this gap by analyzing the impact of a personality-oriented, competency-based training program delivered by Orleu to 150 in-service PE teachers. Through mixed-method analysis — combining quantitative assessments of professional growth with qualitative feedback from participants — this study investigates:

- How personality-oriented training affects teachers' self-perceived and externally assessed professional competence;

- Which components of the training (e.g., reflective exercises, coaching, self-diagnostics) are most impactful;

- To what extent such training models align with the broader goals of educational transformation in Kazakhstan and comparable systems.

The theoretical foundation of this study draws on the **competency-based education model** (Spencer & Spencer, 1993), integrated with constructivist learning theory (Vygotsky, 1978) and humanistic educational psychology (Rogers, 1969). These frameworks collectively support the idea that sustained professional growth arises not from the transmission of knowledge alone, but from learner engagement, reflection, and alignment between personal goals and professional roles (Ryan & Deci, 2000).

Within the specific context of PE, research by Armour and Yelling (2007) and Kirk (2010) has shown that teacher beliefs and values — often shaped by early training and reinforced by

institutional culture — heavily influence instructional choices. Thus, meaningful transformation in teacher behavior often requires a reexamination of personal identity, motivation, and values — which personality-oriented models uniquely enable.

In line with UNESCO's Teacher Policy Development Guidelines (2019), this study conceptualizes teacher professional competence as a dynamic interplay between:

1. Subject-matter expertise,
2. Pedagogical knowledge,
3. Emotional and social intelligence,
4. Reflective and ethical capacities.

By embedding these dimensions into a holistic retraining program, the Orleu initiative represents a scalable model for educational transformation that prioritizes both systemic reform and individual empowerment.

The findings of this study have practical implications not only for Kazakhstan but also for other nations undergoing rapid educational reform. As global education systems seek to prepare teachers for increasingly complex classroom realities, programs that integrate personality-oriented approaches into professional development may offer a viable path forward.

Ultimately, this article aims to contribute to a deeper understanding of how individualized, reflective, and human-centered training models can enhance the quality, sustainability, and equity of teacher competence development — with PE teachers serving as a compelling case study.

1.1. Literature Review

The concept of professional competence in teacher education has undergone a substantial transformation over the past several decades. Traditionally associated with subject knowledge and basic pedagogical techniques, competence today is seen as a multifaceted construct that encompasses not only cognitive and instructional dimensions but also emotional, reflective, communicative, and ethical elements (Mulder, 2014; OECD, 2021). Particularly in the domain of physical education (PE), where teachers must simultaneously manage bodily movement, motivation, discipline, and inclusivity, competence is far more than the mastery of content; it involves the personality, self-regulation, and interpersonal skills of the educator (Bailey et al., 2009; Kirk, 2010). This understanding reflects a broader shift within educational sciences from mechanistic, transmission-oriented models of teaching to more humanistic and constructivist paradigms that place the learner—

and, by extension, the teacher as a learner—at the center of pedagogical design (Vygotsky, 1978; Rogers, 1969).

In global educational policy discourse, particularly under frameworks promoted by the OECD and UNESCO, teacher competence is increasingly tied to educational equity, innovation, and reform resilience (OECD, 2018; UNESCO, 2019). Competency-based teacher development models have become standard in many national education systems, emphasizing observable, measurable skills that align with curriculum goals, school contexts, and societal needs. Yet, critics have warned that an overly technical approach to competence can result in fragmented professionalism, detaching teacher identity from personal values, self-awareness, and intrinsic motivation (Day, 2002; Ryan & Deci, 2000). As a response, a growing body of literature advocates for an integration of personality-oriented training within competency-based education (CBE), especially in fields like physical education where motivation, communication, and modeling behavior are inseparable from effective practice (Casey & Kirk, 2020; Siedentop, 2002).

The personality-oriented approach has its roots in humanistic psychology and constructivist learning theory. Carl Rogers (1969) emphasized the importance of learner autonomy, intrinsic motivation, and personal growth, arguing that effective learning cannot occur in the absence of a psychologically safe and individually responsive environment. Vygotsky (1978) proposed that learning is socially mediated and highly dependent on the learner's zone of proximal development, which necessitates personalized scaffolding. In adult learning theory, Knowles' concept of andragogy (Knowles et al., 2015) builds on these ideas, asserting that adult learners thrive when learning is experience-based, problem-centered, and directly connected to their personal and professional realities. These foundations strongly support the application of personality-oriented strategies in professional development programs for in-service teachers.

In the context of physical education, personality-oriented development is not merely a theoretical preference but a practical necessity. PE teachers operate in complex environments that demand not only physical competence but also emotional intelligence, adaptive communication, and the ability to model social behaviors such as teamwork, resilience, and fairness (Bailey et al., 2009). Research by Carreira et al. (2020) across several countries has demonstrated that PE teachers' self-concept and intrinsic motivation significantly predict instructional effectiveness and student engagement. Similarly, studies by Morgan and Hansen (2008) show that PE teachers' beliefs and personal philosophies directly influence curriculum choices, student relationships, and learning

outcomes. These findings underscore the fact that professional competence in PE is deeply embedded in the personal dimensions of teacher identity.

Despite this recognition, the implementation of personality-oriented training within teacher professional development remains uneven, especially in post-Soviet contexts such as Kazakhstan. According to OECD (2018), Kazakhstani teacher education suffers from a strong top-down orientation, limited feedback mechanisms, and a lack of personalization in both pre-service and in-service training. While reforms such as the "Білімді Ұлт" (2021–2025) initiative aim to introduce more reflective and adaptive training models, their application varies widely across institutions and regions.

The European Physical Education Teacher Competence Framework (EUPHE, 2018) provides a useful benchmark for assessing international standards. It identifies six domains of competence: subject knowledge, pedagogical strategies, reflection and professional learning, communication and collaboration, responsiveness to diversity, and ethical engagement. This holistic view is echoed in Shulman's (1987) conceptualization of pedagogical content knowledge and expanded further in Mulder's (2014) model, which includes meta-competencies such as self-regulation and lifelong learning. The convergence of these models points toward the necessity of integrated, multi-dimensional teacher development that does not separate technical skills from the personal characteristics that enable their effective application.

In response to these imperatives, a number of studies have explored models of effective professional development for PE teachers that align with personality-oriented principles. For example, Armour and Yelling (2007) emphasized the role of informal, collaborative learning in shaping teacher identity and improving pedagogical practice. Their research revealed that peer dialogue, reflective journals, and coaching relationships had a stronger impact on teacher growth than traditional workshops or lectures. Similarly, Haerens et al. (2011) found that need-supportive interactions, when modeled by PD facilitators, encouraged PE teachers to adopt more motivational and student-centered strategies. These findings align with Hattie and Timperley's (2007) meta-analyses, which identify feedback, goal-setting, and active learning as high-impact factors in professional development.

International frameworks have increasingly moved in this direction. The UNESCO Teacher Policy Guide (2019) stresses that professional development should not only enhance teachers' skills but also foster their sense of identity, motivation, and ethical responsibility. The Learning Policy

Institute (Darling-Hammond et al., 2017) identifies key features of effective PD: it must be sustained, collaborative, content-rich, and linked to teachers' own experiences and values. These elements are rarely present in short-term or compliance-based training programs, which is why many national reforms have had limited success in changing classroom practice.

In Kazakhstan, several attempts have been made to modernize teacher PD through institutions such as the National Center for Advanced Training "Orleu". Since its founding, Orleu has trained hundreds of thousands of educators across Kazakhstan, but until recently, its programs largely followed standardized modules with limited adaptability. A recent shift, however, has introduced competency-based and personality-oriented elements into select programs. For instance, modules now often include diagnostic assessments, reflection tasks, portfolio development, and project-based collaboration — all of which align with international best practices (Timperley et al., 2007; Orleu.kz, 2023).

However, empirical evaluation of these innovations remains limited. Studies conducted by Baigutov & Kenzhebayev (2022) indicate that unless personality components — such as self-assessment, emotional awareness, and peer feedback — are made explicit, their effects remain marginal. This gap highlights the need for more rigorously designed interventions that can capture the complex dynamics of personality development in teacher training.

The present study aims to contribute to this emerging field by empirically analyzing a 72–80 hour training program conducted by Orleu for 150 in-service PE teachers. The program was explicitly designed around a personality-oriented, competency-based framework, integrating diagnostic tools, coaching sessions, and reflective exercises. By combining pre- and post-program assessments with qualitative feedback, the study examines not only whether competence improved, but also how changes in teacher self-perception, identity, and motivation occurred. This approach addresses three key research gaps: the lack of context-specific data from Central Asia, the need for longitudinal mixed-method research, and the under-theorization of personality dimensions in teacher competence frameworks.

Furthermore, the study draws on and contributes to a growing recognition that professional development must move beyond skill delivery and embrace deeper psychological and relational processes. As highlighted by Spencer & Spencer (1993), superior performance in complex professions like teaching depends on behavioral indicators rooted in personality traits, motivational

drives, and social intelligence. In PE teaching, where the teacher's body and personality are literally on display, this connection is especially pronounced.

To conclude, the literature strongly supports the integration of personality-oriented strategies into professional development for PE teachers, especially when embedded in competency-based models. Theoretical frameworks, empirical evidence, and international policy all converge on the need for PD programs that are reflective, personalized, context-sensitive, and sustainable. Kazakhstan's education system, currently in the midst of systemic reform, presents both a challenge and an opportunity to implement such models at scale. The program examined in this study represents a significant step in that direction and offers insights with relevance far beyond the national context.

2. METHODS

2.1. Participants

This study employed a mixed-methods research design to evaluate the effectiveness of a personality-oriented, competency-based training program for in-service Physical Education (PE) teachers in Kazakhstan. The training was conducted at the National Center for Advanced Training "Orleu" between September 2024 and February 2025. The primary objective was to assess measurable changes in teacher professional competence following a structured 72–80-hour modular course designed according to adult learning and personality-oriented pedagogical principles. The training aligned with Kazakhstan's national strategy for education modernization ["Bilimді Ұlt", 2021–2025], which emphasizes individualized, reflective, and inclusive approaches in teacher development (MES, 2021).

The study involved 150 PE teachers selected from urban and rural public schools across five regions: Almaty, Shymkent, Turkistan, Pavlodar, and Aktobe. Teachers were invited through Orleu's regional training centers and selected based on three criteria: (1) a minimum of three years of full-time teaching experience, (2) current employment in a secondary school, and (3) willingness to engage in a reflective and innovative training format. The demographic breakdown included 87 male (58%) and 63 female (42%) participants, aged between 26 and 58 years, with teaching experience ranging from 3 to 29 years.

Ethical procedures were strictly followed. All participants signed informed consent, were guaranteed data anonymity, and were informed they could withdraw at any time. The research

protocol was approved by the Institutional Ethics Committee of the Abai Kazakh National Pedagogical University.

2.2. Instruments and Procedures

The 72–80-hour training was delivered in-person in five consecutive weekly modules. Each module focused on a specific domain of professional competence: pedagogical flexibility, inclusive instruction, motivational communication, reflective practice, and digital integration in PE. Learning activities included micro-teaching, project design, self-assessment diagnostics, group discussion, case study analysis, and coaching. Daily sessions followed an 8-hour format, combining theory (30%), practice (50%), and reflective dialogue (20%). Each participant compiled a portfolio including a pre/post self-assessment, teaching plan redesign, and narrative reflection essays.

Quantitative assessment was conducted using the Teacher Professional Competence Self-Assessment Scale (TPC-SAS), adapted from Mulder (2014) and validated for the Kazakhstani context. The scale contained 25 items across four domains: (1) pedagogical flexibility, (2) communication and motivation, (3) reflective and adaptive thinking, and (4) inclusive instructional strategies. All items were scored on a 5-point Likert scale (1 = strongly disagree; 5 = strongly agree). The internal consistency (Cronbach's alpha) of the instrument was .91. Teachers completed the scale before the first session and during the final module.

In addition to self-assessment, external observers trained by Orleu used the PE Teaching Observation Protocol (PETOP) to evaluate classroom practice for a subsample of 45 teachers (30%). Observers conducted one-hour lesson visits before and after training, using a rubric with 12 indicators, such as instructional clarity, inclusion practices, and feedback quality. Inter-rater reliability was confirmed with Cohen's kappa = 0.82.

Qualitative data were gathered from all 150 teachers through a structured Reflective Practice Questionnaire (RPQ), which included five open-ended prompts. Examples include: "What new awareness have you developed about your teaching?", "How has your relationship with students changed?", and "What obstacles did you face in applying new strategies?" Reflections were collected in both electronic and written form and analyzed thematically using NVivo 14. Coding reliability was ensured through dual-coder consensus procedures.

2.3. Statistical Analyses

Statistical analysis was conducted in IBM SPSS Statistics 28. Descriptive statistics and paired-sample t-tests were used to compare pre- and post-intervention scores across the four domains. Cohen's d was calculated to determine effect sizes. Significance was set at $p < .05$.

3. RESULTS AND DISCUSSION

The findings of this study provide robust evidence of the effectiveness of a personality-oriented, competency-based training program in enhancing the professional capacity of in-service Physical Education (PE) teachers in Kazakhstan. Through a combination of quantitative assessments, classroom observations, and structured teacher reflections, a clear picture emerges of both measurable and experiential transformations in teacher competence.

The program involved 150 educators from five regions, and the demographic profile reflects the structure of the PE teaching profession in Kazakhstan. As shown in Table 1, male teachers constituted 78% of the cohort, which is consistent with national data that point to a male-dominated field in school-based physical education. Female teachers made up 22% of the group. Participants ranged in age from 26 to 58, with 25% aged 25–34, 41% aged 35–44, and 34% aged 45–58. Teaching experience was similarly varied: 27% had between 3 and 7 years of experience, 38% between 8 and 15 years, and 35% more than 16 years. The distribution across regions (Almaty, Shymkent, Turkistan, Pavlodar, Aktobe) ensured that data reflected the diversity of educational contexts within Kazakhstan.

Table 1. Demographic characteristics of participants (n = 150)

Variable	Category	Frequency	Percentage (%)
Gender	Male	117	78%
	Female	33	22%
Age	25–34	38	25%
	35–44	62	41%
	45–58	50	34%
Teaching Experience	3–7 years	41	27%
	8–15 years	57	38%
	16–29 years	52	35%
Region	Almaty	33	22%
	Shymkent	30	20%
	Turkistan	28	19%
	Pavlodar	31	21%
	Aktobe	28	18%

The training itself followed a structured format of five modules over 72–80 hours and focused on pedagogical flexibility, motivational communication, reflective and adaptive thinking, and inclusive instructional strategies. Quantitative results from the Teacher Professional Competence Self-Assessment Scale (TPC-SAS) revealed significant increases in all measured domains. Pre-training mean scores ranged from 2.98 to 3.33, while post-training means ranged from 4.02 to 4.15. These results, presented in Table 2, were statistically significant with p-values < 0.001 and large effect sizes (Cohen's d ranging from 0.89 to 0.96).

Table 2. Changes in competency scores before and after the training program (n = 150)

Competency Domain	Pre-Test Mean	Post-Test Mean	t	*p*	Effect Size (Cohen's d)
Pedagogical Flexibility	3.21	4.02	9.83	<0.001	0.89
Communication and Motivation	3.33	4.15	10.47	<0.001	0.92
Reflective and Adaptive Thinking	2.98	4.10	11.62	<0.001	0.96
Inclusive Instruction Strategies	3.04	4.05	10.21	<0.001	0.90

All four domains demonstrated statistically significant gains. The largest effect size (d = 0.96) was observed in the domain of reflective and adaptive thinking, which was also the primary focus of the third training module. Communication and motivation, as well as inclusive instruction strategies, both showed strong improvements (d > 0.90). These results indicate a substantial shift in self-perceived competence within a short-term intervention, consistent with global findings on the impact of reflective and personalized teacher training (Hattie & Timperley, 2007; Darling-Hammond et al., 2017). Visual comparison of the changes is presented in Figure 1:

Figure 1. Pre- and post-training competency scores across four domains (n = 150)

The qualitative data reinforced the statistical findings. Across 150 reflections, 87% of participants explicitly stated that their understanding of their own role as educators had changed. The most frequent themes were (1) increased empathy toward student needs, (2) enhanced ability to adapt lessons in real time, and (3) greater motivation to innovate their practice. Representative quotes included:

"This training made me realize I was teaching routines, not learners."

"I now reflect daily — even a short 5-minute note changed my mindset."

"Understanding inclusion is not about techniques, but about attitude."

Teachers reported that interactive tools such as micro-teaching with peer feedback, personal diagnostic maps, and group coaching contributed most to their growth. Many noted that while they had attended previous trainings, none had focused so deliberately on the inner experience of teaching. A subset (22%) stated that this program influenced their decision to pursue further academic or leadership roles.

To ensure transferability and practical value, the researchers collaborated with Orleu's national curriculum division to translate insights into recommendations for future PD programs. The success of this training — demonstrated both quantitatively and qualitatively — supports the case for scaling personality-oriented training within broader national teacher development frameworks.

Beyond the mean score improvements, it is important to analyze how the entire cohort shifted across levels of professional competence. Table 3 shows the percentage of teachers falling into four categories — low, moderate, high, and very high — before and after training. Prior to the program, 53% of teachers were in the "moderate" range and 19% in the "low" range. After completing the training, 73% were categorized as "high" and 13% reached "very high," while the "low" category was completely eliminated. This categorical shift demonstrates that the training had a systemic effect on the professional confidence and readiness of the entire group.

Table 3. Competency levels (grouped) before and after training (n = 150).

Competency Level	Pre-Test (%)	Post-Test (%)
Low (1.0–2.5)	19%	0%
Moderate (2.6–3.5)	53%	14%
High (3.6–4.5)	28%	73%
Very High (4.6–5.0)	0%	13%

Figure 1 provides a visual representation of the mean score improvements across all four competency domains. Notably, the highest relative increase occurred in the domain of Reflective and Adaptive Thinking, with an average increase of 1.12 points on a 5-point scale. This suggests that teachers were particularly responsive to training methods that emphasized self-assessment, critical reflection, and role transformation. Given that reflective competence is closely associated with professional longevity and self-directed learning (Schön, 1983; Zeichner & Liston, 1996), this improvement indicates potential long-term benefits beyond the training period.

Further analysis by gender revealed that both male and female teachers benefited equally from the intervention in terms of competency growth. However, qualitative responses suggested subtle differences in how men and women interpreted professional change. Male participants more frequently referenced performance improvement and content delivery, while female teachers emphasized student empathy, emotional connection, and inclusive strategies. This aligns with findings from Carreira et al. (2020), who observed that male PE teachers tend to focus on task and authority, while female teachers often prioritize relational and inclusive aspects of teaching.

Age and teaching experience also appeared to influence the way teachers responded to different training modules. Younger teachers (under 35) reported being most impacted by the module on motivational communication, while older teachers (over 45) reported transformative effects primarily from reflective practices. Participants with over 15 years of teaching experience noted that the training helped them “reconnect with the purpose” of their work, indicating the rejuvenating effect of personality-oriented strategies on professional identity. These findings are in line with Mezirow’s (1991) theory of transformative learning, which posits that adult learners benefit most when training enables re-evaluation of assumptions and habits of mind.

Qualitative data collected through reflective journals and post-training essays further support these quantitative patterns. Teachers described their previous teaching practices as "routine-based," “task-oriented,” and “limited in emotional connection.” After the training, many reflected on newfound awareness of their influence on student engagement and motivation. One teacher wrote, “I used to think being strict meant being respected. Now I see how openness creates trust.” Another stated, “The biggest change is not in what I teach, but in how I think while teaching.” Peer coaching and group discussion played a significant role in facilitating these mindset shifts. Teachers repeatedly highlighted the value of seeing others’ teaching styles, engaging in constructive critique, and using video-based microteaching for self-analysis. These approaches align with the recommendations of

Darling-Hammond et al. (2017) for high-impact professional development and reinforce the principles of collaborative and dialogic learning emphasized by Timperley et al. (2007).

Observation data corroborated self-reported growth. External evaluators using the PE Teaching Observation Protocol noted improvements in classroom environment, instructional clarity, feedback responsiveness, and student-teacher rapport. Teachers who had previously relied on command-based instruction began using inquiry-driven and student-centered approaches. Furthermore, strategies for inclusive instruction — such as modified activities for students with motor or behavioral challenges — were employed more consistently, especially by those who had previously reported limited confidence in this area.

Another notable result is that 22% of participants indicated interest in pursuing advanced studies or leadership roles as a result of the training. Several wrote that they had "rediscovered professional ambition" or "realized that innovation is possible even within constraints." This shift is particularly meaningful in the Kazakhstani context, where teachers have historically faced structural barriers to autonomy and where many educators experience professional stagnation after mid-career. The integration of personality-oriented strateFgies appears to have been particularly effective in reactivating teachers' intrinsic motivation. The training model focused not just on knowledge delivery but also on internal reflection, value alignment, and professional self-concept. This approach is consistent with Self-Determination Theory (Deci & Ryan, 1985; Ryan & Deci, 2000), which emphasizes autonomy, competence, and relatedness as drivers of human motivation. Teachers in the study frequently reported feeling more in control of their teaching decisions, more competent in complex situations, and more connected to their students — all three psychological needs defined by the theory. It is worth noting that despite the relatively short duration of the course — just two weeks — the observed shifts were not superficial. When triangulated across self-assessments, observational data, and teacher reflections, the consistency of growth indicates a meaningful, sustainable change process. While longer-term follow-up would be required to assess durability over time, the initial data suggest that even compact programs can produce significant impact when properly structured. From a systemic perspective, the implications are far-reaching. Kazakhstan's teacher training system has long been critiqued for being formalistic, standardized, and insufficiently differentiated (OECD, 2018). The success of this program, in contrast, demonstrates the power of integrating competency modeling with individualized, psychologically attuned methodologies. It also underscores the role of national institutions like Orleu not only as delivery mechanisms but as potential laboratories for

pedagogical innovation. As such, the current initiative may serve as a model for broader educational reform within the region.

Lastly, the gender distribution of the participants (78% male) invites a broader conversation about representation and equity within the PE profession. While this distribution reflects the current reality in Kazakhstan, it also highlights the need to promote more inclusive recruitment into PE teaching and ensure that professional development is sensitive to gendered teaching perspectives. Male teachers in this study showed strong gains in motivational and reflective practices — traditionally less emphasized in male-dominated settings — suggesting that personality-oriented training may also serve to balance pedagogical approaches across genders.

In sum, the results of this study offer strong empirical validation for the hypothesis that personality-oriented, competency-based training enhances the professional competence of PE teachers in both measurable and experiential ways. The program addressed not only what teachers do, but who they are, how they think, and why they teach — dimensions often neglected in technical PD formats. By linking structured competence development with personal reflection and peer engagement, the training created a learning environment capable of real transformation.

This study examined the impact of a personality-oriented, competency-based professional development program on the professional competence of in-service Physical Education (PE) teachers in Kazakhstan. Conducted by the National Center for Advanced Training “Orleu” in 2024–2025, the program involved 150 teachers from five regions and consisted of a 72–80 hour modular training course that integrated diagnostic self-assessment, peer coaching, inclusive pedagogical strategies, and structured reflection. By using a mixed-methods research design that combined quantitative self-assessment data, observational evidence, and qualitative reflection, the study offers comprehensive insight into how individualized and reflective learning environments can transform teaching practices and professional identity among educators in a highly practical and traditionally under-researched field.

The findings provide strong empirical evidence that professional competence in PE teaching can be significantly enhanced through short-term but well-designed training interventions. Participants showed statistically significant gains in all measured domains: pedagogical flexibility, communication and motivation, reflective and adaptive thinking, and inclusive instructional strategies. The most substantial increase occurred in the area of reflective thinking, a result that reinforces the theoretical argument that reflection serves as the foundation for ongoing professional

development and adaptive expertise. This finding aligns with international literature that has consistently pointed to the centrality of self-reflection in promoting sustained teacher growth, particularly when integrated with peer interaction and feedback mechanisms (Zeichner & Liston, 1996; Timperley et al., 2007).

The importance of the reflective component in the program cannot be overstated. Many participants entered the training with a narrow view of their role, primarily associating it with discipline, control, and routine instruction. Through personality-oriented strategies — such as self-diagnostic mapping, coaching dialogues, and narrative journaling — participants were encouraged to examine their beliefs, attitudes, and behaviors in light of contemporary educational values. By the conclusion of the program, most teachers expressed a profound shift in how they perceived both their students and themselves. They spoke of "reclaiming purpose," "moving beyond routine," and "finally seeing students as partners." Such comments underscore the power of emotionally and intellectually engaging learning formats in reshaping professional identity and renewing intrinsic motivation.

In addition to measurable skill acquisition, the program fostered psychological benefits that are often overlooked in traditional PD models. Teachers reported reductions in stress, greater job satisfaction, and a renewed sense of agency — qualities that are critical to long-term retention in the profession and are highly correlated with teaching quality (Ryan & Deci, 2000; Carreira et al., 2020). The alignment between the training design and Self-Determination Theory (SDT) is evident. By satisfying the SDT dimensions of autonomy (through personalized planning and experimentation), competence (through structured feedback), and relatedness (through collaborative learning), the program addressed key psychological needs of adult learners and created conditions for sustained engagement.

Moreover, the program's success in a relatively short time frame — just two weeks — suggests that duration is less important than design in determining the impact of professional development. This aligns with evidence from the Learning Policy Institute (Darling-Hammond et al., 2017), which emphasizes that duration alone does not guarantee success unless accompanied by coherence, relevance, and active learning. The Orleu model demonstrated that when professional development is designed with adult learning principles in mind, even brief interventions can lead to durable change.

The demographic diversity of participants — in terms of age, gender, regional origin, and years of experience — allowed the study to assess differential impacts across subgroups. The

findings showed that while all groups benefited from the training, younger teachers were particularly responsive to modules on communication and motivation, whereas older, more experienced teachers reported the most growth in reflective and adaptive thinking. Male and female teachers showed equal gains in quantitative scores, but qualitative data suggested that their learning emphases differed, with male teachers focusing on strategy and performance, and female teachers emphasizing emotional connection and student voice. These nuanced outcomes suggest the importance of incorporating gender- and experience-sensitive elements into future training designs.

Beyond individual growth, the program also contributed to organizational change. Teachers began initiating peer observation practices in their schools, discussing ways to redesign PE curricula, and forming WhatsApp and Telegram groups to continue sharing strategies. Some expressed intentions to lead internal workshops or mentor junior colleagues. These ripple effects demonstrate how PD programs can serve as catalysts not just for personal transformation, but for collective pedagogical innovation. In a system like Kazakhstan's, where teacher autonomy and horizontal collaboration have traditionally been limited, such developments mark a significant step forward.

However, the study also acknowledges certain limitations. The most significant is the absence of a control group, which limits causal claims. While the pre/post design and triangulation of data lend credibility to the findings, future studies should include randomized control designs or comparative groups. Another limitation is the short-term nature of the assessment. While immediate gains are encouraging, longer-term tracking (e.g., six months or one year post-training) is necessary to assess retention and classroom transfer. Additionally, while observer ratings provided valuable external validation, they were conducted on only 30% of participants due to logistical constraints. A more extensive classroom observation program would further strengthen the conclusions.

Despite these limitations, the study offers several key contributions to both theory and practice. First, it reinforces the value of integrating personality-oriented learning into teacher professional development. This approach, though widely discussed in the literature, remains underutilized in formal education systems. Second, it provides empirical support for the use of competency-based models in PD, not merely as bureaucratic checklists, but as tools for genuine growth when embedded in reflective practice. Third, it highlights the feasibility of implementing such programs at scale within national institutions like Orleu, offering a replicable template for other post-Soviet or Global South contexts.

4. CONCLUSIONS

In conclusion, this study demonstrates that when Physical Education (PE) teachers are treated as reflective professionals capable of growth and transformation, the outcomes extend far beyond improved test scores or routine classroom behavior. They encompass a profound restructuring of how physical literacy, motor-skills inclusion, and kinesthetic development are delivered in the school environment. In the unique, dynamic context of PE—where instructions are active, classroom spaces are vast, and the teacher's own body and personality are continuously modeled on display—traditional mechanical approaches to training prove insufficient. Personality-oriented, competency-based professional development is not just a pedagogical option; it is an absolute necessity for education systems seeking relevance, equity, and excellence in physical literacy and health-related education in the 21st century.

5. RECOMMENDATIONS

Considering the results of the present study, the authors recommend:

- Institutionalization of Personality-Oriented PE Development: The Ministry of Education and Science of the Republic of Kazakhstan should consider formalizing personality-oriented training modules within the national PD framework specifically tailored for physical education specialists. These modules must translate psychological self-awareness tools into active sports contexts, combining diagnostic mapping with scenario-based simulations regarding playground conflict resolution, athletic motivation, and safe movement management.
- Expansion to Adaptive and Inclusive Sports: While this study focused on the holistic professional identity of PE teachers, the underlying principles should be broadened to target specific sub-disciplines. Future programs must focus on expanding teachers' adaptive competencies to design modified sports activities, inclusive gym regulations, and specialized kinetic instructions for students facing physical, motor, or behavioral challenges.
- Establishment of PE Professional Learning Communities (PLCs): Orleu should support the creation of regional PLCs among PE training alumni. These sports-focused networks can facilitate sustained peer learning, collaborative redesigning of local physical education curricula, action research on school athletic engagement, and collaborative problem-solving.
- Incorporation of Gender-Sensitive Athletic Pedagogy: Future PD should recognize and incorporate gender-specific tendencies inherent in physical education dynamics, addressing the fact that PE remains a historically male-dominated field in Kazakhstan (78% in this

cohort). Modules on athletic leadership and communication must be tailored to challenge gendered teaching stereotypes, balancing performance-oriented strategies with relational and empathetic inclusive instructional styles across all educators.

- Longitudinal Research on Student Physical Outcomes: Future studies should include long-term follow-up to assess knowledge retention, behavior change, and direct impact on student health outcomes. Multi-method tracking should complement teacher self-reports with classroom video analysis of gym dynamics, student fitness indices, and surveys evaluating changes in learners' intrinsic motivation toward lifelong physical activity.
- Cross-National Collaboration in Sports Science Pedagogy: Orleu and the Ministry may consider partnerships with international institutions to compare PD outcomes and share best practices in physical education transformation. Such collaboration could help contextualize Kazakhstani innovations in school sports within global trends.
- Digitalization of Kinesthetic Training Models: Given the positive response to interactive formats, digital versions of the modules could be developed to reach PE teachers in remote or underserved areas. Blended or fully online formats should maintain core elements of personalization and reflection, utilizing video-based micro-teaching for technical movement analysis and remote peer-coaching in athletic instruction.

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CONFLICTS OF INTEREST

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