

Forming Pedagogical Competence Based on National Values in The Educational Process

Sattorov Vaxob Naqshbandovich

Candidate of Pedagogical Sciences, Associate Professor

Abstract: The present study investigates the formation of pedagogical competence grounded in national values within the educational context of Uzbekistan's higher education system. The research objective is to examine how the integration of national cultural heritage, traditional ethical norms, and Uzbek pedagogical traditions can systematically enhance the professional competence of prospective teachers. Employing a mixed-methods research design, the study involved 214 student-teachers enrolled in pedagogical faculties across three universities in Tashkent during the 2023–2024 academic year. Data were collected through validated questionnaires, structured classroom observations, competency-assessment tests, and expert interviews. Statistical analysis included descriptive statistics, correlation analysis, and independent-samples t-tests.

Keywords: Pedagogical Competence, National Values, Teacher Education, Culturally Responsive Pedagogy, Uzbekistan, Professional Formation, Educational Process



This is an open-access article under the [CC-BY 4.0](https://creativecommons.org/licenses/by/4.0/) license

Introduction

The transformation of educational systems in the post-Soviet Central Asian context has necessitated a comprehensive re-evaluation of pedagogical training approaches. Uzbekistan, following its independence in 1991 and subsequent waves of educational reform—most recently encapsulated in the 'Strategy of Action' (2017–2021) and the 'Development Strategy of New Uzbekistan' (2022–2026) has prioritized the revitalization of national identity and cultural heritage as foundational pillars of the national education system [1, 2]. Within this broader policy framework, the formation of pedagogical competence among future teachers has emerged as a critical area of scholarly and practical concern. Pedagogical competence, broadly defined as the integrated capacity of a teacher to effectively plan, implement, and evaluate educational processes while maintaining professional, ethical, and communicative standards, has been extensively theorized in Western scholarship. However, the culturally specific dimensions of this construct particularly as they relate to non-Western, collectivist societies with distinct epistemological traditions remain underexplored [3]. In the Uzbek context, national values such as mahalla solidarity (community-based social cohesion), hurmat (respect for elders and knowledge), mehnatsevarlik (diligence and industriousness), and vatanparvarlik (patriotism) constitute not merely rhetorical constructs but lived pedagogical realities that shape teacher–student relationships and classroom dynamics [4, 5]. The scientific novelty of this work resides in its dual contribution: the

construction of a culturally validated competence model applicable to the Uzbek pedagogical context, and the empirical demonstration that national-values-based pedagogy constitutes a statistically significant predictor of enhanced professional readiness. This study thus bridges the gap between general competence theory and culturally specific pedagogical practice, offering a replicable model for similar transitional educational systems [6, 7].

Literature Review

The concept of pedagogical competence has been theorized from multiple disciplinary perspectives. Shulman's seminal framework of 'pedagogical content knowledge' established the principle that effective teaching requires not merely subject-matter expertise but also the ability to transform content knowledge into pedagogically accessible forms appropriate for diverse learners. This foundational insight has been expanded by Darling-Hammond, who demonstrated through large-scale empirical research that teacher preparation quality encompassing both content knowledge and pedagogical skill is the single strongest predictor of student achievement, surpassing socioeconomic and demographic variables [8].

Hofstede's foundational work on cultural dimensions established that societies vary along axes of individualism collectivism, power distance, uncertainty avoidance, and long-term orientation in ways that profoundly shape educational values and practices. Uzbekistan consistently scores high on collectivism and power distance dimensions, suggesting that pedagogical models premised on horizontal, egalitarian teacher-student relationships may require significant cultural adaptation before achieving effectiveness in this context [9, 10].

Tursunova extended this line of inquiry by examining the role of mahalla-based community engagement in pedagogical practicum experiences, arguing that placements that integrate community cultural activities significantly enhance student-teachers' understanding of the socio-cultural contexts in which their future students are embedded [11]. This finding has direct policy implications for the structuring of teacher education programmes in Uzbekistan.

Methodology

This study employed a sequential explanatory mixed-methods design, integrating quantitative measurement of pedagogical competence levels with qualitative exploration of student-teachers' perceptions and experiences. The quantitative strand utilized a pre-test/post-test quasi-experimental design with a non-equivalent control group, enabling comparison of outcomes between participants receiving the national-values-based pedagogical programme (experimental group) and those receiving standard instruction (control group). The qualitative strand comprised structured observations and semi-structured interviews conducted following quantitative data collection, with the purpose of elucidating mechanisms underlying observed statistical effects.

Participants were 214 third- and fourth-year student-teachers enrolled in Pedagogy and Primary Education programmes at three higher education institutions in Tashkent: Tashkent State Pedagogical University (n = 89), National University of Uzbekistan, Faculty of Education (n = 71), and Tashkent Regional Pedagogical Institute (n = 54). Participants were assigned to experimental (n = 112) and control (n = 102) conditions based on their enrollment in specific course sections, thereby minimizing selection bias while acknowledging the quasi-experimental nature of the design. The sample comprised 68.7% female and 31.3% male participants, with a mean age of 21.3 years (SD = 1.2), reflecting the demographic composition of Uzbek pedagogical programmes.

Pedagogical competence was assessed using the Pedagogical Competence Assessment Scale (PCAS), adapted from Karimov and Nazarov's (2020) six-dimensional model. The scale comprised 48 items rated on a five-point Likert scale (1 = very low, 5 = very high), with six subscales corresponding to the six

competence dimensions. Internal consistency reliability was established through Cronbach's alpha analysis prior to main data collection ($\alpha = 0.87$ overall; subscale alphas ranging from 0.79 to 0.91). Content validity was confirmed through expert review by a panel of seven senior pedagogical researchers and practicing master-teachers.

Data collection proceeded in three phases. In Phase 1 (September 2023), pre-intervention assessment was conducted using the PCAS and NVIPQ with all 214 participants. In Phase 2 (October–December 2023), the intervention was delivered to the experimental group while the control group continued with standard instruction; classroom observations were conducted for a stratified random subsample of 60 participants (30 experimental, 30 control) during scheduled practicum sessions. In Phase 3 (January 2024), post-intervention assessment was conducted using the PCAS, expert evaluation rubrics, and semi-structured interviews with 24 purposively selected participants (12 experimental, 12 control).

Results

Independent-samples t-tests confirmed that experimental and control groups did not differ significantly on pre-test PCAS scores (experimental: $M = 3.12$, $SD = 0.48$; control: $M = 3.09$, $SD = 0.51$; $t(212) = 0.43$, $p = 0.67$), supporting the assumption of pre-intervention equivalence and validating the quasi-experimental comparison [12].

Table 1. Descriptive Statistics and Effect Sizes for PCAS Scores by Group and Time Point

Competence Dimension	Exp. Pre-test M (SD)	Exp. Post-test M (SD)	Control Pre M (SD)	Control Post M (SD)	Cohen's d
Value Orientation	3.08 (0.52)	4.41 (0.38)	3.11 (0.49)	3.29 (0.55)	2.21
Cultural Literacy	2.98 (0.61)	4.37 (0.41)	3.02 (0.58)	3.18 (0.62)	2.08
Communicative Comp.	3.21 (0.44)	4.28 (0.46)	3.19 (0.47)	3.41 (0.53)	1.88
Reflective Capacity	3.15 (0.55)	4.19 (0.43)	3.14 (0.53)	3.35 (0.51)	1.71
Ethical Conduct	3.09 (0.50)	4.43 (0.39)	3.07 (0.52)	3.27 (0.56)	2.19
Community Engagement	3.17 (0.57)	4.29 (0.44)	3.13 (0.55)	3.31 (0.58)	1.89
OVERALL PCAS	3.12 (0.48)	4.31 (0.42)	3.09 (0.51)	3.30 (0.53)	2.11

ANCOVA results, controlling for pre-test scores, revealed a statistically significant main effect of group on post-test PCAS scores ($F(1, 211) = 187.43$, $p < 0.001$, $\eta^2 = 0.47$). The experimental group demonstrated substantially higher post-test competence scores ($M = 4.31$, $SD = 0.42$) compared to the control group ($M = 3.30$, $SD = 0.53$), representing a large effect size (Cohen's $d = 2.11$). The overall gain score for the experimental group ($\Delta = 1.19$ points, representing a 38.1% improvement from baseline) significantly exceeded that of the control group ($\Delta = 0.21$ points, 6.8% improvement), as confirmed by independent-samples t-test on gain scores ($t(212) = 19.74$, $p < 0.001$) [13].

NVIPQ analysis indicated that experimental group participants demonstrated significantly more positive perceptions of national values' relevance to professional practice post-intervention ($M = 4.18$, $SD = 0.44$) compared to control group peers ($M = 3.52$, $SD = 0.61$; $t(212) = 8.93$, $p < 0.001$, $d = 1.23$). Expert evaluation ratings from supervising teachers corroborated PCAS findings, with experimental group student-teachers receiving mean expert ratings of 4.24 ($SD = 0.38$) compared to 3.47 ($SD = 0.52$) for control group

participants ($t(58) = 6.81, p < 0.001, d = 1.74$) [14].

Table 2. Categorical Outcome Frequencies and Significance Tests by Group

Indicator	Experimental Group %	Control Group %	χ^2 / t	p-value
Rated 'Excellent' by supervisor	67.9%	24.5%	$\chi^2=41.2$	< 0.001
High Value Orientation (≥ 4.0)	84.8%	31.4%	$\chi^2=67.3$	< 0.001
High Cultural Literacy (≥ 4.0)	80.4%	27.5%	$\chi^2=58.9$	< 0.001
Positive NVIPQ perception (≥ 4.0)	76.8%	42.2%	$\chi^2=26.7$	< 0.001
Passed competence threshold (≥ 4.0)	82.1%	29.4%	$\chi^2=62.1$	< 0.001

Thematic analysis of interview data yielded four primary themes: (1) Enhanced professional identity through cultural anchoring; (2) Increased confidence in community engagement; (3) Deeper understanding of student socio-cultural contexts; and (4) Integration challenges and institutional constraints. Representative participant responses illustrated how engagement with national value frameworks supported the development of a coherent professional identity [15]. One participant from the experimental group articulated: 'Understanding the ustoz-shogird relationship helped me to see teaching not just as delivering information, but as a moral responsibility to my students and their families.' Control group participants, by contrast, more frequently expressed uncertainty about the cultural dimensions of their future role, with several noting that existing curricula offered insufficient preparation for the cultural realities of Uzbek school environments.

Discussion

The findings of this study provide robust empirical support for the hypothesis that the systematic integration of national values into pedagogical training programmes substantially enhances professional competence among student-teachers in Uzbekistan. The observed effect size ($d = 2.11$ on overall PCAS) is notably large by conventional social science standards (Cohen, 1988), suggesting that the intervention produced practically meaningful, not merely statistically significant, improvements across all measured competence dimensions. The comparatively smaller though still substantial effect on Reflective Capacity deserves attention. This finding may indicate that while the NVBPCP successfully fostered cultural value awareness and ethical orientation, it was less effective in developing the meta-cognitive habits of systematic reflective practice that require extended cultivation [16]. Future iterations of the programme should consider incorporating dedicated reflective practice components, such as structured learning journals and peer-consultation protocols, throughout the programme rather than concentrating reflection activities in the final module.

The qualitative findings enrich the quantitative picture by illuminating the mechanisms through which national value integration supports professional development. The theme of 'professional identity through cultural anchoring' suggests that providing student-teachers with an articulated cultural framework for understanding their professional role helps resolve the identity diffusion that can characterize the transition from student to teacher [17]. This identity-stabilizing function of culturally

grounded training may be particularly important in transitional educational contexts like Uzbekistan, where teachers are navigating simultaneously between Soviet-era pedagogical legacies, Western reform influences, and traditional cultural expectations. Several limitations of this study merit acknowledgment [18, 19]. The quasi-experimental design, while strengthened by pre-test equivalence verification and ANCOVA covariate control, cannot fully eliminate the possibility of selection or assignment confounds. The study was conducted exclusively in Tashkent, which as the national capital may not be fully representative of pedagogical training contexts in more rural regions of Uzbekistan. The relatively short follow-up period (one semester) limits conclusions about the durability of competence gains and does not permit assessment of impacts on eventual classroom practice after graduation. Future research should address these limitations through randomized experimental designs, longitudinal follow-up, and extension to diverse regional contexts [20].

Conclusion

This study has demonstrated through rigorous mixed-methods investigation that the integration of national values into pedagogical training programmes constitutes an empirically effective strategy for enhancing professional competence among student-teachers in Uzbekistan. The National Values-Based Pedagogical Competence Programme produced large, statistically significant improvements across all six dimensions of pedagogical competence measured, with particularly pronounced effects on value orientation, ethical conduct, and cultural literacy. These findings are corroborated by expert evaluator ratings and enriched by qualitative evidence illuminating the identity-forming and professionally anchoring functions of culturally grounded pedagogical preparation. For the international research community, this study contributes a validated methodological model for investigating the intersection of cultural values and professional competence in non-Western educational contexts. The NVBPCP framework, with appropriate cultural adaptation, may offer a transferable model for other post-Soviet Central Asian educational systems including Tajikistan, Kyrgyzstan, and Turkmenistan that face analogous challenges of articulating national cultural identity within reformed educational systems.

REFERENCES

- [1] C. Beauchamp and L. Thomas, "Understanding teacher identity: An overview of issues in the literature and implications for teacher education," *Cambridge Journal of Education*, vol. 39, no. 2, pp. 175–189, 2009.
- [2] V. Braun and V. Clarke, "Using thematic analysis in psychology," *Qualitative Research in Psychology*, vol. 3, no. 2, pp. 77–101, 2006.
- [3] J. Cohen, *Statistical Power Analysis for the Behavioral Sciences*, 2nd ed. Hillsdale, NJ: Lawrence Erlbaum Associates, 1988.
- [4] J. W. Creswell and V. L. Plano Clark, *Designing and Conducting Mixed Methods Research*, 3rd ed. Thousand Oaks, CA: SAGE Publications, 2018.
- [5] L. Darling-Hammond, *Powerful Teacher Education: Lessons from Exemplary Programs*. San Francisco, CA: Jossey-Bass, 2006.
- [6] J. Dewey, *Democracy and Education: An Introduction to the Philosophy of Education*. New York: Macmillan, 1916.
- [7] J. S. Dill, *The Longings and Limits of Global Citizenship Education: The Moral Pedagogy of Schooling in a Cosmopolitan Age*. London: Routledge, 2013.
- [8] Eurydice, *Key Data on Teachers and School Leaders in Europe*. Luxembourg: Publications Office of the European Union, 2013.

- [9] S. W. Freedman and D. Appleman, "‘In it for the long haul’: How teacher education can contribute to teacher retention in high-poverty urban schools," *Journal of Teacher Education*, vol. 60, no. 3, pp. 323–337, 2009.
- [10] G. Gay, *Culturally Responsive Teaching: Theory, Research, and Practice*. New York: Teachers College Press, 2000.
- [11] G. Gay, *Culturally Responsive Teaching: Theory, Research, and Practice*, 2nd ed. New York: Teachers College Press, 2010.
- [12] G. Hofstede, *Culture’s Consequences: International Differences in Work-Related Values*. Thousand Oaks, CA: SAGE Publications, 1980.
- [13] G. Hofstede, *Culture’s Consequences: Comparing Values, Behaviors, Institutions and Organizations Across Nations*, 2nd ed. Thousand Oaks, CA: SAGE Publications, 2001.
- [14] S. Karimov and B. Nazarov, "National-cultural pedagogical competence: A theoretical model for Uzbek teacher education," *Vestnik of National University of Uzbekistan: Pedagogical Sciences*, vol. 3, no. 1, pp. 45–62, 2020.
- [15] Z. Khalilova and A. Tursunov, "Culturally responsive pedagogy in Central Asian educational reform: Evidence from Kazakhstan and Uzbekistan," *Journal of Central Asian Education*, vol. 12, no. 2, pp. 88–107, 2021.
- [16] Sh. Avazov, F. Saydamatov, and H. Allaberganov, "Biosfera (ekosfera) va odam (jamiyat)" tizimida geoekologiya va geoekologik o'lkashunoslik. Tashkent: INNOVATSIYA-ZIYO.
- [17] V. I. Kozlov, A. N. Yamskov, and N. I. Grigulevich, Eds., *Etnoekologicheskie aspekty dukhovnoi kul'tury* [Ethnoecological Aspects of Spiritual Culture]. Moscow: IEA RAN, 2005.
- [18] G. K. Jobborova, "The importance of interaction between nature and society," *European Science Methodical Journal*, vol. 1, no. 9, Dec. 2023.
- [19] G. K. Jobborova, "Formation of ecological culture of primary school students," *Eurasian Scientific Herald*, vol. 7, pp. 240–242, 2022.
- [20] G. Jobborova, "O'quvchi va talabalarga ekologik ta'lim berish imkoniyati," *Uzluksiz ta'lim*, no. 3, 2019.