

Integrating Najmiddin Kubro's Spiritual-Ethical Pedagogy into Higher Education: Experimental Study of Students' Moral Competence Development

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Abstract

The modernization of higher education requires pedagogical models that develop not only academic achievement but also moral responsibility, spiritual self-regulation, reflective thinking and socially responsible professional identity. This article examines the educational potential of Najmiddin Kubro's spiritual-ethical heritage for contemporary higher education and evaluates the effectiveness of a heritage-based pedagogical intervention designed to strengthen students' moral-ethical qualities. The study used a quasi-experimental pre-test/post-test design involving 406 student respondents from three higher education institutions in Uzbekistan. The experimental group included 200 students and the control group included 206 students. The intervention was built around four interconnected pedagogical components: integration of pedagogical heritage, development of spiritual competence, strengthening of metacognitive reflection, and developmental assessment. Educational activities included seminars, guided discussions, debates, role plays, group projects, ethical case analysis, reflective tasks and extracurricular cultural-educational events devoted to Najmiddin Kubro's ideas. The results show that the experimental group moved from an initial mean score of 1.86 out of 3.00 (62%) to a final mean score of 2.28 (76%), whereas the control group changed only from 1.92 (64%) to 1.94 (64.7%). The final difference of 11.3 percentage points, supported by Student's t-test ($t = 4.4 > 1.96$, $p < .05$), indicates a statistically significant improvement in the experimental group. The findings suggest that Najmiddin Kubro's pedagogical heritage can be transformed into a practical and inclusive educational resource for values-based higher education when it is applied through reflective, interactive and assessment-oriented methods.

Keywords: Najmiddin Kubro. Higher Education, Moral-Ethical Education, Spiritual Competence, Pedagogical Heritage, Reflective Learning, Developmental Assessment, Uzbekistan.

1. Introduction

Contemporary higher education is increasingly expected to prepare graduates who are not only professionally competent but also ethically responsible, socially engaged and capable of reflective self-development. The rapid expansion of digital communication, cultural globalization and social complexity has intensified the need for educational approaches that connect intellectual development with moral judgement and personal responsibility. In this context, higher education institutions face a dual challenge: they must preserve national and

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regional intellectual heritage while also responding to global standards of quality, innovation and learner-centred pedagogy [1]. This challenge is particularly important in societies with rich traditions of moral philosophy, spiritual education and teacher-student mentorship.

The pedagogical heritage of Najmiddin Kubro offers a valuable conceptual resource for responding to this challenge. Kubro's educational thought is rooted in the idea that knowledge acquisition, moral purification, spiritual awareness and disciplined self-improvement are mutually connected dimensions of human development [2]. Unlike narrow instructional approaches that focus mainly on cognitive achievement, Kubro's pedagogical philosophy understands education as a holistic process of forming the whole person. Such an approach is relevant to current debates on values-based education, character formation, social-emotional learning and the development of responsible professional identity [3].

The conceptual framework of the study identifies four major tasks for adapting Kubro's heritage to contemporary higher education: pedagogical heritage integration, spiritual competence development, metacognitive reflection and developmental assessment. These tasks form a coherent methodological framework. The first task links classical intellectual resources with modern curriculum design. The second focuses on the cultivation of moral awareness, responsibility, compassion, self-regulation and purposeful self-improvement. The third emphasizes reflective learning and the student's ability to evaluate his or her own thinking and conduct. The fourth develops assessment procedures capable of measuring not only academic performance but also moral, spiritual and reflective growth [4].

The present article transforms these theoretical and methodological ideas into an IMRAD-format research paper suitable for adaptation to an international journal. Its central research problem is the following: can the integration of Najmiddin Kubro's spiritual-ethical pedagogy into higher education improve students' moral-ethical qualities in a statistically observable way? To answer this question, the article analyses experimental data collected from 406 students in three Uzbekistani higher education institutions. The study compares the dynamics of experimental and control groups before and after a pedagogical intervention based on Kubro's ideas.

The significance of the research lies in three aspects. First, it demonstrates how medieval Central Asian pedagogical heritage can be reinterpreted as a modern educational resource rather than treated only as an object of historical study. Second, it provides empirical evidence that values-based and heritage-based pedagogy can contribute to students' moral-ethical development when implemented through interactive methods. Third, it offers an adaptable model for integrating intellectual heritage into higher education without reducing it to dogmatic instruction. Instead, the model emphasizes universal values such as responsibility, honesty, patience, humility, compassion, social usefulness and reflective self-regulation [5].

2. Research Method

2.1 Research Design

The study used a quasi-experimental pre-test/post-test design with experimental and control groups. This design was selected because the research was conducted in real higher education settings where random assignment at the individual level was not fully feasible. The intervention focused on the systematic use of Najmiddin Kubro's pedagogical and moral-ethical ideas in learning activities, while the control group continued with ordinary educational practice. The design made it possible to compare the initial and final levels of students' moral-

ethical development and to determine whether the intervention produced measurable improvement [6].

The general logic of the study was based on the assumption that moral-ethical qualities in students can be strengthened when educational content is connected with culturally meaningful intellectual heritage and when learning activities require reflection, dialogue, collaboration and practical application [7]. In the experimental group, Kubro's ideas were not presented merely as historical information. They were transformed into pedagogical situations, reflective questions, ethical cases and interactive tasks. This transformation is important because modern education cannot simply reproduce medieval educational practice; it must reinterpret historical pedagogical ideas in accordance with contemporary learning needs and scientific approaches.

2.2 Participants and Research Sites

The experimental work involved 406 student respondents. The experimental group consisted of 200 students, and the control group consisted of 206 students. The experimental records show that the experiment was conducted across three higher education institutions: Urgench State University, Termez State University, and the Ajiniyoz Nukus State Pedagogical Institute. The Table 1. institutional distribution of students made it possible to test the pedagogical model in different educational environments while maintaining the same general intervention logic [8].

Table 1. General structure of the sample.

Group	Number of students	Role in the study
Experimental group	200	Participated in activities based on Najmiddin Kubro's pedagogical heritage
Control group	206	Continued ordinary educational activities without the full intervention
Total	406	Students included in the pre-test/post-test analysis

2.3 Pedagogical Intervention

The intervention was developed around four interrelated components: (1) integration of pedagogical heritage, (2) development of spiritual competence, (3) strengthening of metacognitive reflection, and (4) developmental assessment. These components correspond to the logic of the research documentation and were adapted into classroom and extracurricular activities. The purpose was not to make students memorize isolated biographical facts about Najmiddin Kubro, but to help them interpret his moral-ethical ideas in relation to their own academic, professional and social conduct.

Table 2. Pedagogical heritage integration involved the selection and contextual interpretation of Kubro's educational ideas, especially those associated with moral self-improvement, disciplined learning, humility, responsibility and the teacher-student relationship [9]. Spiritual competence development focused on values such as honesty, patience, compassion, gratitude, self-control and service to others. Metacognitive reflection required students to analyse their own intentions, learning strategies, moral decisions and personal development. Developmental assessment involved the use of questionnaires, reflective tasks, teacher observation, group activity and comparative pre-test/post-test indicators.

Table 2. Intervention components and educational mechanisms.

Component	Core pedagogical meaning	Methods used in the intervention
Pedagogical heritage integration	Reinterpreting Najmiddin Kubro’s ideas as a modern educational resource	Text-based discussion, curriculum connection, historical-pedagogical interpretation
Spiritual competence development	Formation of moral responsibility, self-regulation and values-based conduct	Ethical cases, guided seminars, debates, role plays, social usefulness projects
Metacognitive reflection	Development of self-observation, self-evaluation and conscious self-improvement	Reflective journals, open-ended questions, self-assessment, peer dialogue
Developmental assessment	Monitoring changes in moral-ethical qualities over time	Pre-test and post-test surveys, grouped achievement levels, statistical comparison

2.4 Instruments

The research materials included questionnaires for students and teachers. The initial student questionnaire contained questions on familiarity with Najmiddin Kubro’s life and teaching, attitudes toward moral-ethical education, understanding of the qualities of an ethically mature teacher, frequency of self-reflection, interest in discussions and role plays, and perception of the teacher-student relationship. The teacher questionnaire focused on familiarity with Kubro’s pedagogical views, the role of moral education in professional development, use of interactive methods, integration of classical thinkers into lessons and difficulties in assessing students’ moral-ethical qualities.

A Likert-scale student survey was also used. It included statements on the importance of moral-ethical education in higher education, the relevance of Kubro’s teaching, the usefulness of interactive methods, the influence of group activities and the need to integrate moral-ethical education across disciplines. The final questionnaire measured perceived growth after the intervention, including increased knowledge of Kubro’s teaching, improved understanding of moral values, greater ability to apply ethical principles in real situations and stronger motivation for personal and professional self-development. Open-ended questions were used to obtain qualitative reflections on changes in students’ views, behaviour and learning experience [10].

2.5 Data Analysis

The quantitative data were organized into three levels: high, medium and low. For statistical calculation, the levels were coded as 3, 2 and 1 respectively. Weighted mean scores were calculated for experimental and control groups before and after the intervention. Mean percentages were obtained by dividing the weighted mean by the maximum possible score of 3 and multiplying by 100. This method made it possible to compare the overall level of moral-ethical development across groups.

The final comparison was assessed using Student’s t-test for independent samples. The statistical records report a final experimental mean of 2.28 and a final control mean of 1.94. The computed t-value was 4.4, while the critical value at the 95% confidence level was 1.96. Because 4.4 exceeds 1.96, the null hypothesis of equal group means was rejected. The statistical records also report an effectiveness coefficient of 1.09 and a knowledge-level

evaluation coefficient of 0.4, both supporting the conclusion that the experimental group achieved stronger results than the control group [11].

3. Results and Discussion

3.1 Initial Group Equivalence

At the Table 3. beginning of the experiment, the control group had a slightly higher overall level than the experimental group. In the experimental group, 49 students were at the high level, 73 at the medium level and 78 at the low level. In the control group, 57 students were at the high level, 74 at the medium level and 75 at the low level. The calculated mean of the experimental group was 1.86 out of 3.00, or 62%, whereas the control group mean was 1.92, or 64%. This baseline pattern is important because it shows that the experimental group did not begin with an advantage. On the contrary, the control group was marginally stronger before the intervention [12].

Table 3. Aggregate pre-test distribution of students by moral-ethical development level.

Group	N	High level	Medium level	Low level	Weighted mean	Percentage
Experimental	200	49	73	78	1.86	62.0%
Control	206	57	74	75	1.92	64.0%

3.2 Post-Intervention Outcomes

After the intervention, the experimental group demonstrated a clear positive shift. The number of students at the high level increased from 49 to 88, while the number at the low level decreased from 78 to 32. In the control group, the distribution changed only slightly: the number of students at the high level was 58 and the number at the low level was 70. The final mean of the experimental group reached 2.28 out of 3.00, or 76%, while the control group reached 1.94, or 64.7%. Thus, the experimental group exceeded the control group by 11.3 percentage points at the end of the study.

The Table 4. post-test data indicate that the intervention had its strongest influence in moving students from the low level to the medium and high levels. This is pedagogically important because moral-ethical education is not limited to improving already strong students; it also aims to support students who initially demonstrate weaker awareness, motivation or practical application of moral values. The sharp decline in the low-level category in the experimental group suggests that interactive and reflective methods based on Kubro's heritage helped students internalize key ethical concepts more effectively [13].

Table 4. Aggregate post-test distribution of students by moral-ethical development level.

Group	N	High level	Medium level	Low level	Weighted mean	Percentage
Experimental	200	88	80	32	2.28	76.0%
Control	206	58	78	70	1.94	64.7%

3.3 Institutional Dynamics

The institutional records show a consistent pattern across Urgench State University, Termez State University and the Ajiniyoz Nukus State Pedagogical Institute. In each institution, the experimental groups improved after the intervention, while the control groups remained comparatively stable. For example, at Urgench State University, the total experimental

distribution changed from 19 high, 27 medium and 30 low before the intervention to 33 high, 31 medium and 12 low after the intervention. At Termez State University, the total experimental distribution changed from 18 high, 28 medium and 30 low to 33 high, 31 medium and 12 low. At the Nukus institute, the total experimental distribution changed from 12 high, 18 medium and 18 low to 22 high, 18 medium and 8 low. These changes indicate that the intervention model was not dependent on a single institutional context [14].

The Table 5. control groups also showed small natural changes, but they did not demonstrate the same magnitude of improvement. This pattern strengthens the interpretation that the observed change in the experimental group was associated with the pedagogical intervention rather than with general maturation alone. The use of multiple sites also increases the practical relevance of the model for Uzbekistani higher education institutions that aim to integrate cultural and intellectual heritage into professional preparation.

Table 5. Experimental group dynamics by institution.

Institution	Before intervention: High/Medium/Low	After intervention: High/Medium/Low	Main change
Urgench Pedagogical Institute	19 / 27 / 30	33 / 31 / 12	High level increased; low level decreased sharply
Termez Pedagogical Institute	18 / 28 / 30	33 / 31 / 12	High level increased; low level decreased sharply
Jizzakh State Pedagogical University	12 / 18 / 18	22 / 18 / 8	High level increased; low level decreased

3.4 Statistical Significance

The statistical analysis confirms the pedagogical interpretation of the data. The experimental group’s final mean was 2.28, and the control group’s final mean was 1.94. The difference between the final means was 0.34 points on a three-point scale. When converted into percentages, the experimental group reached 76%, while the control group reached 64.7%. The experimental group therefore exceeded the control group by 11.3 percentage points and by approximately 1.2 times in relative terms.

Table 6. Student’s t-test was used to evaluate whether the difference between the final means was statistically significant. The calculated value was $t = 4.4$. With the reported degrees of freedom of approximately 402.5 and a 95% confidence level, the critical value was 1.96. Because $t = 4.4$ is greater than 1.96, the null hypothesis that the two group means are equal was rejected. This means that the final difference was not merely descriptive; it was statistically meaningful. The confidence interval analysis also indicated that the experimental and control intervals did not overlap in a way that would challenge the conclusion of higher performance in the experimental group.

Table 6. Summary of final statistical comparison.

Indicator	Experimental group	Control group	Interpretation
Final weighted mean	2.28	1.94	Experimental group higher

Final percentage	76.0%	64.7%	Difference = 11.3 percentage points
Standard deviation estimate	0.72	0.79	Control group more dispersed
t-test result	t = 4.4	Critical t = 1.96	Null hypothesis rejected at p < .05
Effectiveness coefficient	K = 1.09	Threshold = 1.00	Pedagogical effectiveness confirmed

4. Discussion

The results support the assumption that Najmiddin Kubro’s pedagogical heritage can be transformed into an effective resource for contemporary higher education. The intervention was successful not because it simply introduced students to a historical figure, but because it converted the ethical and reflective content of Kubro’s thought into active learning experiences. Students were encouraged to discuss moral dilemmas, evaluate their own conduct, analyse the qualities of an ethically mature teacher, participate in role plays and group projects, and connect moral principles with professional identity. This combination of heritage-based content and interactive method appears to have created conditions for measurable growth.

A central implication of the study is that pedagogical heritage should be understood as a dynamic educational resource. Historical texts and teachings do not automatically become effective in modern classrooms. They require interpretation, contextualization and methodological transformation. In the present study, Kubro’s ideas were linked to current educational concepts such as learner-centred pedagogy, reflective practice, moral competence, social responsibility and developmental assessment. This helped avoid two common risks: treating heritage as decorative historical material, or using it as rigid moral instruction without learner engagement.

The strongest result was the shift in the experimental group from low and medium levels toward higher levels of moral-ethical development. This suggests that the intervention contributed to internalization rather than superficial recognition. Activities such as debates, seminars and role plays are especially useful because they require students to apply ethical concepts in communicative and practical situations. Reflective journals and self-assessment also support metacognitive growth because they require students to observe their own thinking, emotions, choices and behaviour. In this sense, the study confirms the value of combining moral education with reflective learning.

The results are also relevant for teacher education. The study questionnaires asked students and teachers about the qualities of an ethically mature teacher, the role of the teacher-student relationship and the value of integrating classical thinkers into lessons. In Kubro’s pedagogical worldview, the teacher-student relationship is not merely a channel for transmitting information; it is a moral and developmental relationship based on example, responsibility, discipline and mutual respect. This idea remains highly relevant for modern teacher training, especially when future teachers are expected to serve as models of professional ethics and civic responsibility.

Another important implication concerns assessment. Traditional assessment often measures cognitive achievement but has difficulty capturing moral awareness, spiritual growth and reflective self-development. The study addressed this problem by combining level-based quantitative indicators with questionnaires and reflective tasks. Although such assessment

cannot fully capture the depth of moral transformation, it provides a more balanced picture than academic testing alone. Future research can strengthen this approach by adding validated scales, longitudinal follow-up, classroom observation rubrics and qualitative interview analysis.

The findings should nevertheless be interpreted with caution. The study used a quasi-experimental design rather than full randomization, so unmeasured group differences may have influenced the results. The three-level scale is practical and easy to interpret, but it simplifies the complex nature of moral-ethical development. The available dataset reports aggregate data rather than individual-level responses, which limits the possibility of more advanced statistical analysis. In addition, the intervention was implemented in the cultural context of Uzbekistani higher education; adaptation to other contexts should consider local values, institutional expectations and learner backgrounds.

Despite these limitations, the study offers a promising model for integrating national intellectual heritage into internationally recognizable educational research. The model is compatible with global discussions of holistic education, character formation, social-emotional learning and reflective professional development. It also shows that the modernization of education does not require abandoning cultural heritage. On the contrary, modernization becomes richer when it draws from historically grounded ethical traditions and translates them into inclusive pedagogical practice [15].

5. Conclusion

This study examined the effectiveness of using Najmiddin Kubro's spiritual-ethical pedagogical heritage in higher education. The findings show that a structured intervention based on heritage integration, spiritual competence development, metacognitive reflection and developmental assessment produced statistically significant improvement in students' moral-ethical development. The experimental group improved from 62% to 76%, while the control group remained almost unchanged, moving from 64% to 64.7%. The final t-test result ($t = 4.4 > 1.96$) confirms that the improvement in the experimental group was statistically significant at the 95% confidence level.

The study demonstrates that Kubro's pedagogical ideas can be adapted to modern higher education when they are implemented through interactive, reflective and student-centred methods. Seminars, discussions, debates, role plays, group projects, ethical case analysis and reflective tasks helped students connect moral values with personal behaviour and professional responsibility. In this respect, the study contributes both to the preservation of Central Asian pedagogical heritage and to the development of contemporary values-based education.

For practice, the article recommends that higher education institutions integrate classical pedagogical heritage into teacher education, humanities, social sciences and professional ethics courses. Such integration should be methodological rather than merely informational: students should actively interpret, discuss, apply and evaluate inherited ethical ideas. For research, future studies should use larger samples, validated measurement instruments, mixed-method designs and longitudinal follow-up to examine the durability of moral-ethical development. Overall, Najmiddin Kubro's heritage can serve as a meaningful foundation for educating intellectually active, morally responsible and reflectively mature future specialists.

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