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DEVELOPMENT OF LEADERSHIP COMPETENCIES AMONG FUTURE TEACHERS IN THE EDUCATIONAL PROCESS OF THE UNIVERSITY

This article looks at how pedagogical universities can better develop leadership skills in their students. These capabilities matter because schools need teachers who can lead and manage educational settings effectively.

We examined several leadership theories. The classical approach focuses on inherent traits that make someone a good leader. Situational leadership suggests that effective leadership depends on the context. Transformational leadership emphasizes inspiring and motivating others toward change. Distributed leadership spreads responsibility across multiple people rather than concentrating it in one person. Finally, ethical leadership prioritizes moral principles in decision-making. Additionally, the article emphasizes the essential role of pedagogical reflection in the development of leadership capabilities, recognizing it as a critical element in shaping a teacher's professional identity.

Survey results from students and faculty at teacher training universities show strong consensus: leadership competencies are central to effective teaching. Essential leadership competencies include personal qualities like self-confidence, charisma, and empathy, as well as professional skills such as effective communication and organizational ability. Despite the recognition of these traits, the respondents evaluated the current level of leadership training within pedagogical institutions as moderate, signaling the need for substantial enhancement of existing educational programs.

To address this, a structured model was developed for cultivating leadership skills in future educators, particularly in the context of managing instructional environments. The model's effectiveness was validated through a pedagogical experiment employing the "Leader" method and the "Leadership Effectiveness" framework.

The article recommends a range of strategies to strengthen leadership preparation: implementing dynamic training sessions focused on practical leadership development; initiating school-based leadership projects; designing and applying case studies for analyzing administrative scenarios; and utilizing virtual simulation tools to practice decision-making and classroom leadership in controlled, interactive environments.

Keywords: competences, leadership, leadership competences, pedagogical management, future educators, students, teachers.

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ЖОО-ның білім беру процесінде болашақ педагогтердің көшбасшылық құзыреттілігін дамыту

Бұл мақала педагогикалық университеттер студенттерінде көшбасшылық дағдыларын қалай жақсырақ дамыта алатынын қарастырады. Бұл қабілеттер маңызды, өйткені мектептерге білім беру ортасын тиімді басқара және басқара алатын мұғалімдер қажет.

Біз көшбасшылықтың бірнеше теорияларын зерттедік. Классикалық тәсіл адамды жақсы көшбасшы ететін туа біткен қасиеттерге назар аударады. Жағдаяттық көшбасшылық көшбасшылықтың тиімділігі контекстке байланысты деп болжайды. Трансформациялық көшбасшылық басқаларды өзгерістерге шабыттандыру және ынталандыруға баса назар аударады. Үлестірілген көшбасшылық жауапкершілікті бір адамда шоғырландырмай, бірнеше адам арасында бөледі. Ақырында, этикалық көшбасшылық шешім қабылдау кезінде моральдық принциптерді бірінші орынға қояды. Сонымен қатар мақалада педагогикалық рефлексияның көшбасшылық қабілет-

терді дамытудағы өте маңызды рөлі атап өтіледі, оны мұғалімнің кәсіби бірегейлігін қалыптастырудағы критикалық маңызды элемент ретінде мойындайды.

Педагогикалық жоғары оқу орындарының студенттері мен оқытушыларының сауалнама нәтижелері берік келісімді көрсетеді: көшбасшылық құзыреттіліктері тиімді оқыту үшін орталық болып табылады. Негізгі көшбасшылық құзыреттіліктері өзіне деген сенімділік, харизма және эмпатия сияқты жеке қасиеттерді, сондай-ақ тиімді коммуникация және ұйымдастырушылық қабілеттер сияқты кәсіби дағдыларды қамтиды. Осы қасиеттердің маңыздылығын мойындағанына қарамастан, респонденттер педагогикалық оқу орындарында көшбасшылық саласындағы даярлықтың ағымдағы деңгейін орташа деп бағалады, бұл қолданыстағы білім беру бағдарламаларын айтарлықтай жетілдіру қажеттігін білдіреді.

Бұл мәселені шешу үшін болашақ педагогтарда, әсіресе оқу ортасын басқару контекстінде көшбасшылық дағдыларын дамытудың құрылымдық моделі әзірленді. Модельдің тиімділігі «Көшбасшы» әдістемесі және «Көшбасшылық тиімділігі» тұжырымдамасын пайдалана отырып педагогикалық эксперимент арқылы расталды.

Мақалада көшбасшыларды даярлауды күшейту үшін бірқатар стратегиялар ұсынылады: көшбасшылықты практикалық дамытуға бағытталған серпінді тренингтер өткізу; мектептік көшбасшылық жобаларын бастау; басқарушылық сценарийлерді талдауға арналған кейс-әдістерді әзірлеу және қолдану; бақыланатын интерактивті ортада шешім қабылдау және сынып көшбасшылығын жаттықтыру үшін виртуалды модельдеу құралдарын пайдалану.

Түйін сөздер: құзыреттілік, көшбасшылық, көшбасшылық құзыреттілігі, педагогикалық менеджмент, болашақ педагогтер, студенттер, мұғалімдер.

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Развитие лидерских компетенций у будущих педагогов в образовательном процессе вуза

В статье рассмотрен вопрос о том, как педагогические университеты могут лучше развивать лидерские навыки у своих студентов. Эти способности важны, поскольку школам необходимы учителя, способные эффективно руководить образовательной средой и управлять ею. Изучены теории лидерства. Классический подход фокусируется на врожденных качествах, которые делают человека хорошим лидером. Ситуационное лидерство предполагает, что эффективность лидерства зависит от контекста. Трансформационное лидерство делает акцент на вдохновении и мотивации других к изменениям. Распределенное лидерство распространяет ответственность между несколькими людьми, а не концентрирует ее в одном человеке. Наконец, этическое лидерство ставит во главу угла моральные принципы при принятии решений. Кроме того, в статье подчеркивается важнейшая роль педагогической рефлексии в развитии лидерских способностей, признавая ее критически важным элементом в формировании профессиональной идентичности учителя.

Результаты опроса студентов и преподавателей педагогических вузов демонстрируют мнение, что лидерские компетенции являются центральными для эффективного преподавания. Основные лидерские компетенции включают личностные качества, такие как уверенность в себе, харизма и эмпатия, а также профессиональные навыки, такие как эффективная коммуникация и организаторские способности. Несмотря на признание значимости этих качеств, респонденты оценили текущий уровень подготовки в области лидерства в педагогических учебных заведениях как средний, что сигнализирует о необходимости существенного совершенствования существующих образовательных программ.

Для решения этой проблемы была разработана структурированная модель развития лидерских навыков у будущих педагогов, особенно в контексте управления учебной средой. Эффективность модели была подтверждена посредством педагогического эксперимента с использованием методики «Лидер» и концепции «Эффективность лидерства». Рекомендован ряд стратегий для усиления подготовки лидеров: проведение динамичных тренингов, ориентированных на практическое развитие лидерства; инициирование школьных лидерских проектов; разработка и применение кейс-методов для анализа управленческих сценариев; использование инструментов виртуального моделирования для отработки принятия решений и классного лидерства в контролируемой интерактивной среде.

Ключевые слова: компетенции, лидерство, лидерские компетенции, педагогический менеджмент, будущие педагоги, студенты, учителя.

Introduction

In the contemporary educational landscape, the educational system in Kazakhstan is undergoing significant adjustments to better align with the evolving demands of the labor market. This shift necessitates that educators possess not only a deep understanding of their respective fields but also a diverse range of professional competencies. Among these, leadership skills have emerged as particularly crucial. The labor market increasingly favors dynamic, motivated, and resilient young professionals who demonstrate the ability to take initiative and lead others effectively.

Currently, leadership skills, characterized by the ability to inspire, organize, and direct a group, are becoming essential qualifications when hiring new teachers. Many individuals who exhibit leadership tendencies enter the teaching profession with foundational leadership experience, which they have acquired either during their school years or through training at pedagogical institutions. The growing emphasis on leadership is largely driven by its impact on teaching success. A teacher's capacity to motivate students, support their personal development, and create an engaging and effective classroom environment plays a pivotal role in shaping educational outcomes.

Teachers who assume leadership roles within the educational setting go beyond merely managing classrooms. They inspire and energize their colleagues, introduce innovative approaches to teaching, and effectively address challenges that might otherwise impede progress. Cultivating these leadership capabilities in future teachers is no longer an optional endeavor—it has become a necessity.

Teacher preparation programs are already positioned to foster leadership skills, and the current moment presents a particularly opportune time for such an initiative. The outdated model of teachers as mere disseminators of knowledge has lost its relevance, with this narrow definition of teaching no longer resonating in contemporary educational contexts.

Modern teaching demands far more than the delivery of academic content. It requires the coordination and facilitation of learning experiences. Teachers play a critical role in shaping how students understand concepts of right and wrong, how they interact with others, and how they perceive themselves in the broader social context. Leadership competencies are essential in this regard, as without them, teachers would be ill-equipped to handle the

complexities inherent in these responsibilities. The quality of education depends on the presence and development of these leadership skills.

Several challenges are associated with this issue. Future educators receive insufficient preparation for leadership roles. Teacher education programs lack clear criteria for assessing leadership development. Universities make limited use of effective pedagogical strategies for nurturing leadership skills. Educators tend to undervalue leadership in organizational and educational contexts. The role of leadership in managing educational activities remains generally underappreciated.

This research explores and validates effective strategies and theoretical frameworks for developing leadership qualities in prospective teachers. The study also emphasizes the significance of these competencies in managing educational processes. This study focuses on teacher candidates, particularly students enrolled in pedagogical universities. The central objective of the research is to examine the processes through which leadership qualities are developed and nurtured in these future educators.

The scientific relevance of this research lies in its focus on the underexplored area of developing leadership qualities in prospective teachers within Kazakhstan's educational system. While leadership as a concept has received some attention, its practical application in teacher preparation programs, particularly in the context of managing and overseeing educational processes, remains insufficiently developed. This gap is critical, as it indicates a lack of clear frameworks for integrating leadership competencies into teacher education programs, especially those designed to improve the governance of academic environments. The absence of such integration represents a significant, albeit underexamined, area within the field of education research.

This issue becomes more significant when we consider the need for teachers who can lead meaningful changes in classrooms and schools. It is increasingly clear that the traditional model of teacher preparation, which focuses primarily on academic content delivery, is no longer adequate. This study highlights the urgent need to develop systems that can effectively train teachers capable of taking leadership roles in their professional environments. Despite the growing recognition of the importance of leadership in education, relatively few studies have thoroughly examined how to best prepare teachers to take on these responsibilities.

Based on the theoretical foundations of transformational, situational, and distributed leadership

models, and considering the learner-centered educational approach, we hypothesize that the systematic development of leadership competencies in future teachers through a structured pedagogical model will result in measurable improvements in both their leadership qualities and leadership effectiveness. Specifically, we expect that:

1) Students who participate in targeted leadership training will demonstrate significantly higher levels of leadership qualities compared to those receiving traditional pedagogical education;

2) The enhancement of leadership qualities will correlate positively with increased leadership effectiveness potential;

3) Practical, experience-based methods (including training sessions, school-based projects, and case studies) will be more effective in developing leadership competencies than purely theoretical instruction.

In practical terms, the research findings could help reshape teacher training systems, with the ultimate aim of improving teaching quality. Effective teacher training directly correlates with enhanced student learning outcomes. Furthermore, when teachers possess leadership skills, they are better equipped to create positive changes within their schools, thereby benefiting the entire educational ecosystem. The implications of this research underscore the need for a more robust approach to teacher preparation—one that emphasizes leadership as a core component of educators' professional development.

Literature review

In the educational context, leadership competencies represent a specific set of professional capabilities that distinguish effective educators from those who merely deliver content. Teacher leadership competencies encompass three interconnected dimensions: cognitive (knowledge of leadership theories and educational management principles), functional (practical skills in organizing, motivating, and guiding learning processes), and personal (traits such as confidence, charisma, and emotional intelligence that enable influence and inspiration).

Unlike general leadership, pedagogical leadership competencies are uniquely situated within the teacher-student dynamic and the educational environment. A teacher-leader must simultaneously manage classroom processes, inspire student engagement, facilitate collaborative learning, and model ethical behavior. This multidimensional

nature requires competencies that extend beyond traditional classroom management to include the ability to initiate educational innovations, mentor colleagues, and contribute to institutional development (Buchanan, 2020).

This aligns with contemporary competency-based approaches in teacher education. These approaches emphasize that effective teaching requires both subject-matter expertise and the capacity to lead learning communities (Ambon, 2023). The development of these competencies is particularly urgent in Kazakhstan's educational system, where reforms demand teachers who can adapt to changing contexts and lead educational transformation at the classroom and institutional levels.

Before examining theoretical approaches and empirical findings, it is essential to establish terminological clarity regarding the central construct of this study. Throughout this article, we employ the term "leadership competencies" (rather than "leadership qualities" or "leadership skills") as the primary descriptor of what future teachers need to develop. This terminological choice requires careful justification.

Leadership competencies represent an integrative construct that encompasses three interrelated components:

Personal qualities (traits) – relatively stable individual characteristics such as self-confidence, charisma, empathy, resilience, and creativity. These qualities form the psychological foundation of leadership capacity and influence how individuals naturally approach leadership situations. While some scholars emphasize the trait-based nature of leadership (classical trait theory), contemporary research recognizes that even these seemingly innate qualities can be developed and strengthened through intentional pedagogical interventions (Barth, 2023).

Professional skills (abilities) – learnable, demonstrable capabilities including communication, decision-making, conflict resolution, strategic planning, team motivation, and organizational management. Unlike personal qualities, skills are explicitly teachable and can be systematically developed through training, practice, and feedback (Jais & Yahaya, 2021). In the educational context, these skills manifest as the ability to manage classroom dynamics, facilitate collaborative learning, and guide students toward academic and personal goals.

Leadership attitudes (mindsets and values) – cognitive orientations and value commitments that shape how individuals perceive their role and responsibilities as leaders. These include beliefs about

distributed leadership, commitment to ethical decision-making, orientation toward continuous self-improvement, and dedication to student welfare and educational equity (Nilsson, 2023). Attitudes bridge the gap between what one can do (skills) and what one chooses to do (action), making them crucial for sustained leadership effectiveness.

We use the term “competencies” because it integrates all three components into one framework. A competency is not just possessing a quality or demonstrating a skill. It is the capacity to mobilize knowledge, qualities, skills, and attitudes effectively in authentic professional contexts (Menlibekova, 2023). An individual might possess communication skills and confidence (quality + skill), but without the appropriate attitude toward collaboration and respect for diverse perspectives, these elements do not constitute leadership competence.

In teacher education, leadership competencies refer to the integrated capacity of future educators to:

- Organize and manage educational processes;
- Inspire and motivate students;
- Make informed decisions in complex situations
- Build collaborative relationships
- Initiate and implement innovations
- Reflect critically and grow professionally
- Model ethical behavior

This conceptualization aligns with contemporary competency-based approaches in education, which recognize that effective professional practice requires not fragmented knowledge or isolated skills, but rather the sophisticated integration of multiple dimensions of capability (Ualieva et al., 2024). Throughout this article, when we refer to “leadership qualities,” we are describing the personal trait dimension of leadership competencies; when we discuss “leadership skills,” we reference the functional dimension. However, our primary focus remains on leadership competencies as the comprehensive construct that synthesizes all these elements into actionable professional capacity.

It is also important to distinguish leadership competencies from leadership effectiveness. Competencies represent potential capacity – what an individual is capable of doing. Effectiveness represents actual performance – how well those competencies translate into positive outcomes in real educational contexts. One can possess strong leadership competencies but demonstrate varying levels of effectiveness depending on situational factors, experience, and contextual support. This study examines both dimensions, investigating how pedagogical

interventions develop competencies and how those competencies predict potential effectiveness.

E.N. Kuchina (2020), in her research on educational leadership as a developmental asset for the academic system, notes that various theories and models exist concerning leadership in the teaching profession. Each model presents distinct viewpoints and interpretations of what it means to lead within educational environments, illustrating the breadth of thought on the subject and the ongoing development of leadership theories in this field.

This article also explores the views of leading scholars on how both personal qualities and social contexts contribute to the development of leadership skills among students attending pedagogical universities. In Kazakhstan, many national researchers have examined the concept of professional competence, with notable contributions from scholars such as N. Ualieva (2023), R.M. Aitzhanova (2021), N.Gerasimova (2023), and others. These scholars have conducted comprehensive studies on the formation of professional-pedagogical competencies, with a particular focus on issues relevant to the educational system in Kazakhstan. Their research provides valuable insights into how leadership competencies are intertwined with broader professional competencies in the context of teacher education.

L.E. Koyshygulova (2022) also stresses the importance of adapting the learner-centered educational framework to the rapidly evolving dynamics between individuals, society, and the state. She argues that this approach should foster educational environments that equip future professionals with the ability to develop social and project-based competencies. By doing so, it nurtures crucial personal qualities in students, such as independence, creative thinking, and responsibility, which are foundational in shaping their professional identities within the university setting. Koyshygulova’s work emphasizes the role of higher education institutions in cultivating not only academic knowledge but also the broader competencies that students need to thrive in the modern workforce.

In a similar vein, G. Sarzhanova (2021) suggests that a student’s motivation to develop leadership skills is intrinsically linked to their learning ability—how well they absorb and internalize new information and strategies in leadership and organizational management. Sarzhanova’s research highlights the importance of creating learning environments that spark students’ curiosity and encourage them to take initiative. By cultivating such environments, students are more likely to develop a genuine interest

in leadership and embrace roles that require them to lead and influence others.

From a psychological perspective, J. Shen (2020) points to the concept of the “zone of proximal development” as a key factor in leadership development. Shen’s argument emphasizes the importance of mentorship in the development of leadership abilities. According to Shen, students learn leadership most effectively when they collaborate with experienced mentors who can accelerate their understanding of leadership roles and the demands these roles entail. This mentorship dynamic plays a crucial role in helping students develop the skills and confidence necessary to assume leadership positions.

N. Ngo (2024) offers an alternative perspective on leadership development by examining its role in schools and universities. Ngo argues that a student’s ability to demonstrate leadership behaviors is influenced not only by personal drive and knowledge but also by the maturity and readiness of the surrounding group. The learning environment’s collective motivation and commitment to shared goals create the optimal conditions for the emergence and growth of leadership qualities. This underscores the importance of a supportive and collaborative environment in fostering leadership development among students.

Further contributions to the discourse on leadership development in teacher education come from scholars like K. Priest (2021), who emphasizes that the development of leadership qualities in students from pedagogical institutions is profoundly influenced by their age group characteristics. According to Priest, the most essential leadership qualities for future educators include a combination of professional competence, creative thinking, ethical awareness, and strong interpersonal communication skills. These qualities are fundamental for preparing teachers who can lead and inspire their students effectively.

O. Muammar (2021) highlights that one of the critical factors in developing leadership abilities in future educators is the structure of their academic training in universities. He argues that teacher education should go beyond the simple transmission of subject-specific knowledge, incorporating the intentional development of practical competencies that are essential for effective leadership in the classroom. This perspective suggests that leadership in education is not just about theoretical understanding but also about the application of skills in real-world teaching situations.

I.S. Konokpaeva (2021) further emphasizes that to enhance leadership capacities in teacher candi-

dates, significant transformations must occur within contemporary educational systems. She suggests that effective strategies for leadership development should include integrating leadership training with mentoring practices and reinforcing it through dynamic, experience-based models of teacher preparation. By combining practical mentoring with theoretical learning, teacher candidates can better internalize leadership concepts and apply them in their teaching contexts.

In a similar vein, N.T. Ualieva (2024) proposes a structured model designed to foster leadership qualities in future teachers. According to this framework, students must not only acquire foundational knowledge but also demonstrate ambition and commitment to success in their future professional endeavors. The model encourages students to practice independent decision-making and apply creative thinking, enhancing both their intellectual and vocational abilities. The intended outcomes of this model include the development of self-worth and professional identity, aligning academic content with real-world teaching practice, and orienting teacher education programs toward fostering leadership behaviors that are crucial in educational settings.

T.S. Zhumasheva (2019) also recognizes leadership as a key marker of professional success for future educators. In her examination of leadership traits in early childhood educators, Zhumasheva highlights the importance of continuous self-improvement. She proposes a model centered on personalized self-development, encouraging teacher preparation programs to foster these leadership qualities in a tailored manner. This model acknowledges that leadership development is an ongoing, individualized process that requires constant reflection and growth.

Several theoretical frameworks inform our understanding of teacher leadership. The Situational Leadership Theory, developed by Hersey-Blanchard and Fiedler, posits that leadership effectiveness is contingent upon the context. This theory suggests that teachers must adapt their leadership styles—whether directive, supportive, participative, or delegative—based on the needs of their students and the readiness of the group. Such flexibility is essential in schools, where the dynamics of student learning and group behavior are constantly shifting.

The Distributed Leadership Model further emphasizes that leadership in schools is a collective endeavor. Decision-making should be shared among all stakeholders—teachers, students, and parents—creating a more inclusive and collaborative approach

to school management. This model underscores the importance of collective responsibility and the role of teachers in guiding their students and colleagues toward shared educational goals.

Academic literature increasingly supports the idea that leadership skills must be systematically and deliberately nurtured within teacher education programs. The essential qualities of effective pedagogical leadership are identified as the ability to influence others positively, earn respect within the group, and utilize integrative approaches that unite students around common objectives. Furthermore, leadership in education requires applying socio-psychological strategies that allow teachers to play a guiding role while fostering healthy, productive relationships within the educational community.

Recent research by Kazakhstani scholars reflects a shift toward student-centered approaches in education, aimed at unlocking each learner's potential. These scholars emphasize the need for teacher training programs to build autonomy, responsibility, and creative thinking in students. Focused attention is given to cognitive and competence-based teaching methods, the design of learning experiences that encourage critical self-reflection, and the cultivation of personal qualities that contribute to the development of teacher-leaders. These findings align with global trends in education, where policymakers stress the importance of teachers who are adaptable, forward-thinking, and capable of navigating a changing job market and societal context.

Research also demonstrates several key indicators of teacher leadership development: teachers engage in reflective practice, actively involve students in the learning process, and foster classrooms based on collaboration and mutual support. These qualities are vital for shaping effective teachers who can lead both in and outside the classroom.

Despite the growing body of theory and research, significant gaps remain, particularly in the context of Kazakhstan's education system. The influence of national and cultural factors on pedagogical leadership in Kazakhstan's ethnically diverse society has not been sufficiently examined. Most leadership development frameworks rely on universal models that do not account for the unique sociocultural and institutional context of Kazakhstani schools. This lack of contextual adaptation renders these models difficult to implement effectively.

Additionally, there is a shortage of reliable, validated instruments to assess leadership competencies in education students. Assessment tools that can accurately measure the progress of future teachers and

evaluate their leadership capacity throughout their training are urgently needed.

The broader educational context also requires more attention. Elements such as curriculum design, the structure of teacher education programs, mentorship arrangements, and student involvement in governance all play a significant role in leadership development. However, these factors have not been studied in a sufficiently integrated manner. Research has tended to focus on individual elements rather than considering how they interact and influence leadership development.

The need for a more holistic approach to studying leadership development is clear, one that draws insights from pedagogy, psychology, sociology, and educational management (Oppi, 2020). Identifying these gaps not only emphasizes the importance of this research but also highlights areas where further exploration is needed, both theoretically and practically. To achieve meaningful results, any future research must be grounded in the specific realities of Kazakhstan's education system.

Materials and methods

Terminology Note: Throughout the research instruments and data collection procedures, the terms "leadership qualities," "leadership skills," and "leadership competencies" were used contextually to match the language familiar to different stakeholder groups. However, in our analysis and interpretation, we treat these as dimensions of the unified construct "leadership competencies" as defined in the literature review. When survey respondents identified specific "qualities" or when assessment tools measured particular "skills," these findings are interpreted within the comprehensive framework of leadership competencies.

- A thorough review of existing literature was conducted to analyze academic sources and assess the theoretical and practical significance of leadership competence in education.

- A survey-based research approach was used, with structured questionnaires distributed to university lecturers, students, and practicing teachers organized into separate focus groups. This method was aimed at identifying the key leadership qualities needed by future teachers.

To understand the leadership qualities most important for future teachers, we distributed a questionnaire among three groups: university teachers at A. Margulan Pavlodar Pedagogical University, pedagogy students, and school teachers in Pavlodar. All respondents completed a ten-question questionnaire

designed to reflect the specific context and professional experience of their respective groups. The study was conducted from February to May 2025.

We implemented a 16-week structured leadership development program (48 contact hours total) with three components:

Program Structure:

- Theoretical modules: 16 hours (8 sessions)
- Practical training: 24 hours (12 sessions)
- School-based practicum: 8 hours (4 sessions)

Sessions ran twice weekly. Each session: theory (30%), practice (50%), reflection (20%).

Theoretical Content (5 modules):

1. Educational Leadership Foundations: leadership theories, teacher-leader roles, ethics
2. Educational Management: classroom management, decision-making, strategic planning
3. Communication and Influence: communication strategies, motivation, building trust
4. Team Building: distributed leadership, collaborative environments, group coordination
5. Reflection and Growth: reflective practice, self-assessment, leadership philosophy

Practical Training (12 sessions):

- Self-assessment and goal-setting
- Communication workshops (role-playing, active listening, feedback)
- Conflict resolution (case studies, simulations, mediation)
- Team leadership (group projects, parent-teacher meetings)
- Decision-making simulations (crisis scenarios, discipline issues, ethical dilemmas)
- Public speaking (presentations, storytelling, transformational behaviors)

School Practicum (4 sessions): Observing teacher-leaders → Co-leading activities → Independent facilitation → Reflection

Integration: Integrated into “Educational Psychology” course for academic credit. Control group received standard curriculum without leadership components.

Assessment Tools:

1. «Leader» Diagnostic Methodology
 - 50 items, five subscales (10 items each): organizational abilities, communication, decision-making, emotional intelligence, initiative
 - 5-point Likert scale (1=strongly disagree to 5=strongly agree)
 - Total score: 50-250 points
 - Levels: Strongly pronounced (180-250), Moderate (130-179), Weak (50-129)
 - Psychometric properties: Cronbach’s $\alpha = 0.87$, test-retest $r = 0.82$

- Completion time: 20-25 minutes

2. Leadership Effectiveness Methodology (R.S. Nemov)

- 40 items, four dimensions: task-oriented, relationship-oriented, adaptive flexibility, inspirational influence

- Binary/3-point scale depending on item type

- Maximum score: 40 points

- Levels: High (30-40), Moderate (11-29), Low (0-10)

- Completion time: 15-20 minutes

Timeline:

- Pre-test: Week 1 (before program)

- Post-test: Week 16 (after program)

- Administered by blind research assistants

Feedback Mechanisms: Weekly reflections, peer feedback, instructor feedback, mid-program formative assessment, final summative assessment (written exam + practical demonstration)

Data were analyzed using SPSS Statistics 26.0. Descriptive statistics (means, standard deviations, percentages) were calculated for all variables. Between-group differences were examined using independent samples t-tests for continuous variables and chi-square tests for categorical variables. Within-group changes from pre-test to post-test were analyzed using paired samples t-tests.

To examine the relationship between leadership qualities and leadership effectiveness, Spearman’s rank correlation coefficient (ρ) was calculated. This non-parametric measure was chosen because the data were ordinal (categorical levels rather than continuous scores). The correlation analysis tested the hypothesis that students demonstrating stronger leadership qualities would also exhibit higher leadership effectiveness potential.

Statistical significance was set at $p < 0.05$ for all analyses. Effect sizes were calculated using Cohen’s d for t-tests and r for correlations to evaluate the practical significance of findings beyond statistical significance.

The selection and allocation of participants into experimental and control groups followed a rigorous methodological procedure to ensure validity and minimize potential bias. The total sample consisted of 48 third-year students enrolled in the educational psychology program at Pavlodar Pedagogical University named after A. Margulan during the 2024-2025 academic year.

All participants met the following inclusion criteria: (1) third-year standing in the educational psychology program; (2) completion of foundational coursework in pedagogy and psychology; (3) no pri-

or specialized training in leadership development; (4) voluntary consent to participate in the study; and (5) regular attendance throughout the academic semester. Students who had previously participated in formal leadership training programs or held significant leadership positions in student organizations were excluded to ensure baseline comparability.

Prior to group assignment, all 48 participants completed initial assessments using both the “Leader” diagnostic methodology and the “Leadership Effectiveness” methodology developed by R.S. Nemov. These baseline measurements were conducted in February 2025 and served to establish the initial leadership competency levels of all participants. Statistical analysis confirmed no significant differences in baseline leadership qualities or effectiveness potential between the groups prior to the intervention ($p > 0.05$), validating the randomization process.

Random allocation procedure: Following baseline assessment, participants were randomly assigned to either the experimental group (EG) or the control group (CG) using a simple randomization technique. Specifically, each participant was assigned a unique identification number (1-48), and a random number generator was employed to allocate participants into two equal groups of 24 students each. This randomization procedure ensured that any pre-existing differences in leadership potential, academic performance, or personal characteristics were distributed equally across both groups, thereby minimizing selection bias.

Both the experimental and control groups consisted of 24 participants each, maintaining gender and age comparability. The experimental group included 17 female and 7 male students with a mean age of 20.3 years ($SD = 0.8$), while the control group comprised 18 female and 6 male students with a mean age of 20.4 years ($SD = 0.7$). No statistically significant differences were observed in gender distribution ($\chi^2 = 0.09$, $p = 0.76$) or age ($t = 0.42$, $p = 0.68$) between the groups.

The experimental group participated in a specially designed leadership development program that ran from February to May 2025. This program consisted of weekly sessions totaling 36 contact hours, combining theoretical instruction (12 hours), practical training workshops (16 hours), and school-based practicum experiences (8 hours). The curriculum covered transformational leadership theory, situational leadership application, conflict resolution strategies, communication skills development, and pedagogical decision-making simulations.

The control group continued with the standard educational psychology curriculum during the same period, which included regular coursework in child development, learning theories, and assessment methods. Importantly, the control group received no exposure to the specialized leadership development content or practical training provided to the experimental group. This design allowed for isolation of the leadership intervention’s effects.

All 48 participants completed the full duration of the study with zero attrition in either group. Complete data sets were obtained for all participants at both baseline (February 2025) and post-intervention (May 2025) assessment points, ensuring the integrity of the longitudinal analysis.

In May 2025, both groups underwent final assessment using the same instruments employed at baseline: the “Leader” diagnostic methodology and the “Leadership Effectiveness” methodology. Assessment conditions were standardized across both time points and both groups to ensure measurement reliability. All assessments were administered by trained research assistants who were blind to group assignment, minimizing potential assessor bias.

The study received approval from the Ethics Committee of Pavlodar Pedagogical University. All participants provided written informed consent after receiving detailed information about the study’s purpose, procedures, potential benefits, and their right to withdraw at any time without penalty. Participants in the control group were offered access to the leadership development program materials after the completion of the study, ensuring equitable access to educational benefits.

Results and discussions

Researchers have used different theories and methods to study teachers’ roles. This helps us understand how educators can work more effectively. Teaching itself requires certain leadership qualities – that’s just part of the job.

When teachers have these qualities, they can guide their students more effectively, get them engaged in learning, and build classrooms where everyone thrives.

Figure 1 shows the main theories and models that relate to teacher leadership.

The results of the survey-based research, designed to identify the key leadership skills essential for future educators and evaluate their preparedness within the context of teacher training institutions, are shown in Tables 1, 2, and 3.

Figure 1*Theories and concepts regarding the pedagogue leader*

Traditional leadership theory (trait theory) or personalistic approach	• It is based on the assumption that a successful leader has certain innate qualities: confidence, charisma, determination, intelligence and communication skills. • Teachers with these characteristics can more easily gain authority among students and colleagues and influence them.
The concept of situational leadership (based on the theories of Hersey-Blanchard and Fiedler)	• It is based on the conditions expressed in the fact that the effectiveness of leadership actions depends on the specific situation • Situational leadership helps a teacher to better adapt to different learning conditions. For example, a teacher may use, depending on the maturity level of students, different leadership styles: directive, supportive, participative or delegative
Distributed Leadership theory (Distributed Leadership)	• This theory emphasises the importance of participation of all members of the collective included in the educational process (teachers, students, parents) in decision-making and management of the educational process.
The concept of ethical leadership	• According to this theory, a teacher-leader should demonstrate high moral standards, honesty, fairness and respect for others. Since it is ethics that forms a more trusting relationship between teacher and students, and creates a trusting and positive atmosphere in the classroom
A concept based on pedagogical reflection	• The reflective teacher constantly evaluates his/her behaviour and teaching methods, interactions with students and colleagues in order to improve teaching practice and to be an effective leader

*Source / Note: This figure was compiled by the authors based on the analysis of materials***Table 1***Results of the response of teachers of the pedagogical university*

Question №	Answers
What leadership qualities do you consider the most important for the successful fulfillment of the professional duties of a future teacher?	Confidence – 70% Communication – 80% Organizational skills – 70%
In your opinion, how should these qualities be developed in future teachers?	School practice is –70%. Advanced training courses – 20% Self-education – 2%. Case studies – 40% Work on projects – 30%. Role-playing games – 20% Soft skills trainings – 50%
How important are distributed leadership skills in the work of a modern teacher?	Very important – 60% Average importance – 40% Not important – 0%

Table continued

Question №	Answers
What style of leadership do you think is the most effective in an educational environment?	Directive – 20%. Supportive – 30%. Participating – 20%. Delegating – 10%. Transformational – 20%
What, according to your observations, prevents students of a pedagogical university from developing the necessary leadership competencies?	Lack of practice – 40%. Lack of motivation – 30%. Fear of responsibility – 20%. Low self-esteem – 10%
What practical tasks or activities do you use in your practice to develop students' leadership skills?	Project activity – 50%. Practical internship – 40%. Creation of student councils – 30%. Psychological trainings – 20%
Do you often encounter student resistance when implementing leadership development measures, and how do you overcome this barrier?	Yes, there is a resistance of – 30%. No resistance – 70%
How important is the support of the university administration in the development of students' leadership skills?	High support – 40%. The average support is – 50%. Low support – 10%
In what ways do you assess the effectiveness of developing leadership competencies among your students?	Testing – 30%. Behavior monitoring – 50%. Assessment cards – 20%
What innovative techniques or technologies are you introducing into the educational process to improve the leadership skills of future teachers?	Use of digital platforms – 30%. Interactive classes – 40%. Coaching – 20%. Game forms – 10%

Source / Note: This table was compiled by the authors based on the analysis of materials

According to university faculty, the most vital leadership attributes encompass confidence, clear communication, and strong organizational aptitude. Leadership growth is primarily facilitated through direct teaching practice, participation in interpersonal skill-building workshops, and involvement in project-oriented learning experiences. A large proportion of respondents note the rising importance of shared, or distributed, leadership in modern education systems. Among the various leadership styles, the supportive model is seen as the most applicable, followed by directive and participatory approaches.

The main obstacles hindering the advancement of students' leadership skills are identified as limited hands-on experience, lack of intrinsic motivation, and reluctance to assume responsibility. Leadership potential is most frequently cultivated through project-based tasks, professional practicums, and participation in student self-governance. Faculty members report that student resistance to leadership-oriented initiatives occurs only occasionally.

The predominant approach to assessing leadership development is through direct observation of

students' conduct in authentic academic or organizational settings. Most respondents regard administrative backing from the university as moderately to highly significant in promoting leadership growth. Among the teaching methods utilized, digital learning platforms, interactive instructional techniques, and coaching-based approaches are considered particularly effective for strengthening leadership competencies.

When students were asked about their perceptions of leadership, they highlighted qualities such as charisma, self-assurance, emotional intelligence, and creative thinking as essential traits for effective leadership. However, approximately half of the students expressed uncertainty about their ability to lead a classroom at the present moment. They indicated a need for more practical experience in real-world teaching settings before they felt capable of assuming such a role. The primary challenges that students identified were managing conflicts between students, addressing discipline issues, and improving their time management skills.

Table 2*Results of the response from students of the pedagogical university*

Question №	Answers
What leadership qualities do you consider the most important for the successful fulfillment of professional duties as a teacher?	Charisma – 80%. Confidence – 90% Communication skills – 70%. Empathy – 60% Determination is 80%. Self-development ability – 70% Time management skills – 50%. Organizational skills – 60% Adaptability is – 70%. Creativity – 80%
How confident do you feel as a potential class leader?	Fully ready – 30% Feeling insecure – 40% Additional experience is needed – 20% Not ready at all – 10%
What difficulties do you personally have when interacting with the class/ students?	Conflicts with students – 40% Problems with discipline – 50% Distrust from colleagues – 30% Time management difficulties – 40%
What types of activities and activities contribute to the development of leadership competencies among students?	Participation in student projects is – 50%. Training sessions – 60% Lectures and seminars – 40%. Individual consultations – 30% Practice in schools is – 70%. Development of own programs – 50%
Evaluate your own level of leadership competencies on a scale: high/ medium/low.	High level – 20% The average is – 50% Low – 30%
Have you used the opportunities to work independently on leadership development outside the university curriculum?	Used – 40% Not used – 60%
Have you ever had to take on a leadership role in a project or event?	It was – 50% It was not – 50%
What factors prevent you from freely exercising your leadership skills?	Fear of failure – 40% Lack of support – 30% Personal insecurity – 20% Insufficient training – 10%
What is the difference between an effective teacher-leader and an ordinary teacher?	Creative approach – 40% Effective class management – 30% Innovativeness of ideas – 20% An example to follow – 10%
Should leadership studies be included in the compulsory curriculum of the Faculty of Education?	Be sure to turn on – 60% You can leave it optional – 30% Not necessarily – 10%

Source / Note: This table was compiled by the authors based on the analysis of materials

What students most desired were practical learning opportunities, including teaching internships, involvement in group projects where they could take on leadership roles, and specific training sessions dedicated to developing leadership skills. Over fifty percent of respondents felt that their leadership abil-

ities were moderate—neither strong nor weak—while nearly a third admitted to having limited competence in this area. A small group of students mentioned that they were actively trying to build their leadership skills independently, outside of the classroom environment.

Interestingly, despite many students having had opportunities to lead events or oversee projects during their studies, approximately half of them reported never having actually engaged in such activities. This discrepancy suggests a gap between theoretical opportunities for leadership and the practical application of those opportunities.

The main psychological barriers that students identified as hindering the active use of their leadership abilities included the fear of making mistakes and the lack of adequate encouragement. These barriers suggest that a supportive environment, which fosters risk-taking and provides constructive feedback, is essential for the development of leadership skills.

From the students' perspective, an effective educational leader is someone who not only fosters innovation but also maintains order and student engagement. Additionally, such a leader brings creativity into the teaching process, effectively balancing structure and flexibility to inspire students.

The overwhelming majority of students strongly supported the idea of integrating leadership training into teacher education programs, particularly within the Faculty of Education. This suggests that there is significant demand for more structured and intentional efforts to cultivate leadership skills among future educators, as students recognize the importance of these competencies in their professional development.

Table 3

Teacher response results

Question №	Answers
What are the three most important leadership qualities that, in your opinion, a modern teacher should possess?	Charisma – 50% Authority – 40% Communication skills – 60%
What difficulties do you face when performing leadership functions in the classroom?	Discipline – 40% Stress resistance – 30% Time Management – 20%
Do you need additional support to develop your leadership skills? If so, in what form?	Additional courses – 50% Regular training sessions – 30% Professional development – 20%
Is the leadership training you received at a pedagogical university enough?	No, it's not enough – 70% Yes, – 30 % is enough.
What are your suggestions for improving the training of future teachers in the theory and practice of leadership at the university?	More practical tasks – 40% Feedback from experienced teachers – 30% Use of interactive formats – 30%
Have you ever seen examples of successful leadership among colleagues? Briefly describe one such case.	Yes, I have – 60% No examples – 40%
Does participating in school events help you develop your leadership skills?	Useful – 70% It doesn't matter – 30%
What resources or tools would help you develop your leadership skills more?	Seminars – 40% Online courses – 30% Leadership literature – 30%
How do you think students' success in leadership growth can be measured?	Observations – 50% Testing – 30% Projects – 20%
What prevents students from developing leadership skills?	Lack of adult example – 40% Misunderstanding of parents – 30% Lack of incentives – 30%

Source / Note: This table was compiled by the authors based on the analysis of materials

Educators commonly identify key leadership qualities such as effective communication, personal authority, and charisma as essential for successful teaching. These attributes are seen as foundational for guiding students, fostering a positive learning environment, and effectively managing classroom dynamics. However, teachers face several significant obstacles that hinder the full execution of leadership duties. The most frequently cited challenges include student misconduct, difficulty managing stress, and a shortage of time. These factors create barriers to implementing effective leadership practices and achieving desired educational outcomes.

A notable concern expressed by teachers is the perceived inadequacy of leadership training provided by universities. Three-quarters of educators believe that their institutions fall short in preparing them for leadership roles within the classroom. As a result, teachers are calling for more dedicated coursework and regular workshops designed to address this gap in their professional development. This demand highlights the need for a more robust and focused approach to leadership training in teacher education programs.

When asked about their specific needs for leadership development, teachers consistently emphasize the importance of practical assignments, mentorship from experienced colleagues, and the use of interactive classroom techniques. These methods resonate most with educators as effective ways to cultivate leadership skills. By engaging in hands-on tasks and learning directly from seasoned mentors, teachers can develop the necessary competencies to lead more effectively in diverse classroom settings.

Approximately 66 percent of teachers reported having witnessed strong examples of leadership among their peers. Many educators attribute their own leadership development to their involvement in school activities, suggesting that active participation in extracurricular or leadership-oriented tasks plays a significant role in building leadership capabilities. This observation underscores the value of creating opportunities for teachers to take on leadership roles outside of the traditional classroom environment.

In terms of resources, teachers find certain tools particularly valuable in supporting the development of their leadership skills. Seminars, online platforms, and professional reading materials are frequently cited as effective resources. These tools not only provide theoretical insights but also offer practical strategies that teachers can implement in their own classrooms. The availability and use of these resources appear to have a genuine, positive

impact on educators' ability to build and refine their leadership skills.

When it comes to assessing students' progress in leadership development, teachers predominantly rely on behavioral observation. This method allows them to evaluate how students exhibit leadership qualities in real-world situations. However, approaches such as standardized tests and project-based evaluations are less commonly used in assessing leadership skills. This suggests a preference for more qualitative, dynamic methods of assessment that focus on observable behaviors and interactions within the learning environment.

The primary factor limiting the development of leadership skills among schoolchildren is identified as the lack of inspiring role models and minimal involvement or encouragement from parents. Without positive leadership examples and active support from home, students may struggle to develop the necessary leadership qualities for their personal and academic growth. This highlights the importance of creating a more supportive and motivating environment, both in the classroom and at home, to nurture the leadership potential of young learners.

The fundamental leadership competencies—encompassing both personal qualities and professional skills—that teachers emphasize in Figure 2, which provides a visual representation of these key attributes and their interrelatedness.

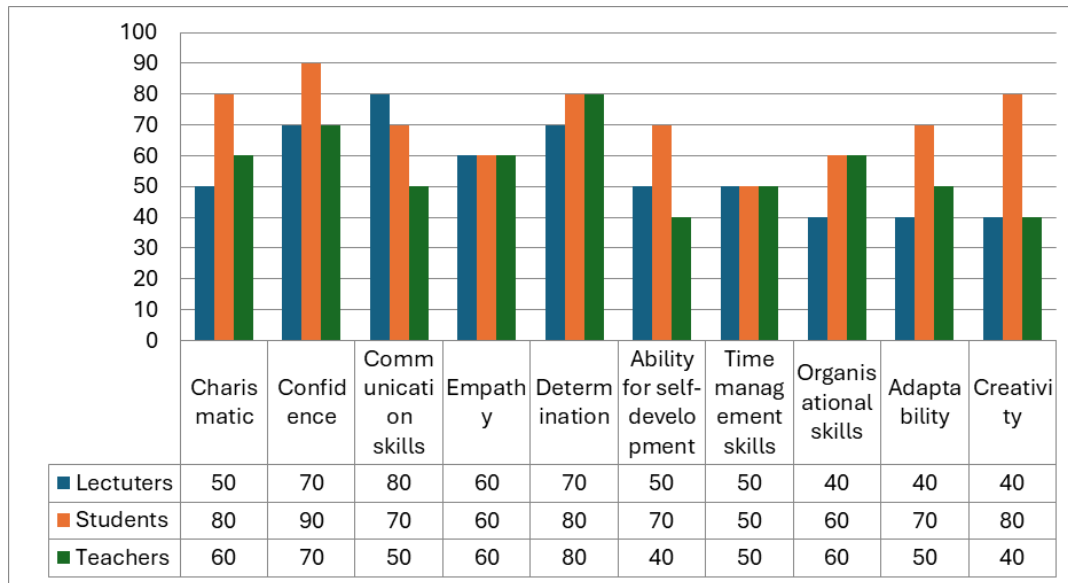
Figure 2 illustrates the most important components of leadership competencies identified by different stakeholder groups. It is notable that respondents from all three groups emphasized elements spanning all three dimensions of competencies: personal qualities (confidence, charisma, empathy), professional skills (communication, organizational ability), and developmental orientations (creativity, self-improvement capacity). This distribution confirms that stakeholders intuitively recognize leadership as a multidimensional construct rather than a single trait or isolated skill.

Teachers most commonly highlight leadership traits such as communication skills (80%), self-assurance (70%), and organizational ability (70%). In contrast, students emphasize traits like confidence, charisma, determination, and creativity as the most important leadership qualities, while time management is mentioned less often.

Educators primarily link leadership to decisiveness (80%) and confidence (70%), with creativity and the ability to improve oneself being noted less frequently, each acknowledged by 40% of respondents.

Figure 2

Comparative characteristics of the most important leadership competences needed by future teachers



Source / Note: This figure was compiled by the authors based on the analysis of materials

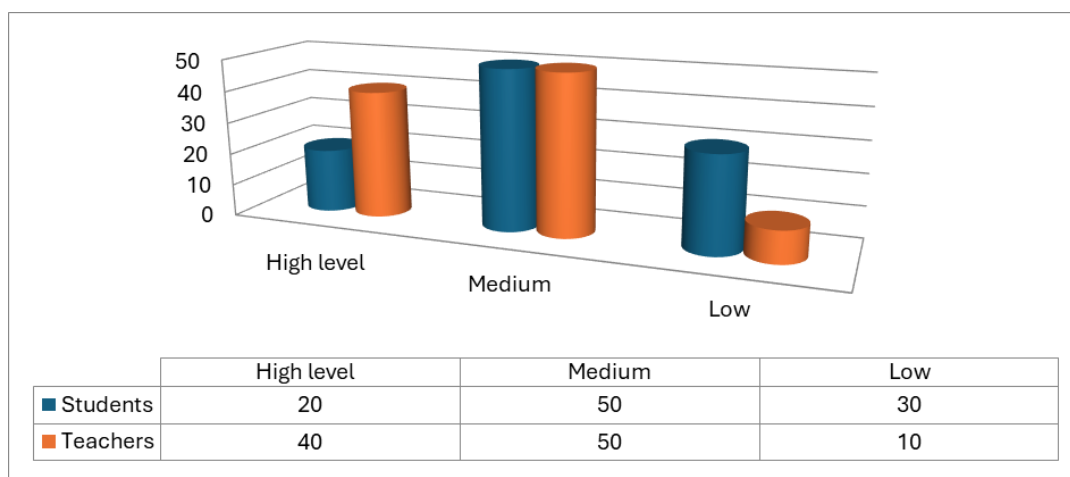
The perceived readiness of students to take on leadership roles varies significantly. Only 30% express complete confidence in their leadership abilities, while the majority, 60%, feel uncertain and believe they require more hands-

on experience. A smaller group, 10%, consider themselves entirely unprepared for leadership responsibilities.

The level of higher education is illustrated in Figure 3.

Figure 3

Comparative characteristic of the indicator on the level of preparation of future teachers for leadership in higher education institution



Source / Note: This figure was compiled by the authors based on the analysis of materials

About half of the students said their leadership training at university was just okay. Twenty percent thought it was good, while thirty percent felt they didn't get enough preparation. Teachers had similar views – half rated the training as average. However, more teachers (40%) saw it as strong compared to students, and only 10% said it wasn't good enough.

We created a framework to help future teachers develop leadership abilities. The goal is to build the skills they need to lead, help them manage classrooms better, and improve their growth as professionals.

The framework has several parts. First, we figure out what skills people already have. Then we teach them the basics of leading in education. They get hands-on practice with real leadership situations. We also work on building the personal quali-

ties leaders need. There are ways to measure how much people learn. The framework fits into existing university programs. We make sure there's support for continuous improvement. And we define what success looks like.

The expected benefits of implementing this model in higher education include: enhancing the managerial skills of future educators, improving the operational efficiency of educational environments, and boosting classroom performance metrics, such as academic success and student behavior.

The results of student assessments using the "Leader" diagnostic tool are shown in Table 4. Recall that both groups (EG, n=24 and CG, n=24) were equivalent at baseline, with random assignment ensuring comparability prior to the leadership intervention.

Table 4

Assessment of students' ability to be leaders

Group	Period	Strongly pronounced (36-50 points)	Moderate severity (26-35 points)	Mild symptoms (<25 points)
EG	At the beginning	13	46	41
EG	Finally	38	50	12
CG	At the beginning	12	45	43
CG	Finally	15	48	37

Source / Note: This table was compiled by the authors based on the analysis of materials

The collected data reveal a significant improvement in the experimental group, with a notable increase in the proportion of students exhibiting strong leadership qualities. Since the start of the experiment, the percentage of students demonstrating a pronounced level of leadership has nearly tripled (from 13% to 38%). The average level has seen a slight increase (from 46% to 50%), while the number of students with underdeveloped leadership traits has sharply decreased (from 41% to 12%). In contrast, the control group displays minimal changes.

Table 5 presents the results from R.S. Nemov's Leadership Effectiveness methodology, which assesses students' potential effectiveness as leaders on a scale from 0 to 40 points, categorized into three levels: highly effective (30-40 points), moderately effective (11-29 points), and low effectiveness (≤ 10 points).

Table 5

Assessment of the potential effectiveness of student leadership

Severity level	EG	CG
	At the beginning	At the beginning
Highly Efficient (30-40)	12	10
Medium-effective (11-29)	58	60
Low effective 10 or less	30	30
	Finally	Finally
Highly Efficient (30-40)	42	15
Medium-effective (11-29)	48	65
Low effective 10 or less	10	20

Source / Note: This table was compiled by the authors based on the analysis of materials

At the start of the assessment, only 12% of students in the experimental group exhibited high leadership effectiveness. However, by the end of the training program, this proportion significantly increased to 42%. The number of students who considered themselves moderately effective leaders saw a slight rise (an increase of 10%), while those categorized as having low leadership effectiveness decreased notably from 30% to 10%.

The control group, on the other hand, barely changed. Only 5% more students reached the highly effective leader category, students with moderate effectiveness stayed roughly the same, and the lower effectiveness group dropped by a mere 5%.

What do these numbers tell us? The leadership training made a real difference for students who received it. It backs up our conceptual model and confirms what we expected to find. Students in the experimental group didn't just go through the motions they actually developed stronger leadership skills and got better at handling educational management tasks.

We wanted to dig deeper into how leadership qualities connected with actual leadership effectiveness, so we ran a Spearman's rank correlation test on the experimental group data.

Initial Data:

1. Sample size: 24 participants
2. Expression of leadership qualities: $X = \{13\%, 38\%\}$
3. Leadership potential: $Y = \{12\%, 42\%\}$

Rank Calculation for Leadership Qualities (RX):

- 13% $\rightarrow RX1 = 1$
- 38% $\rightarrow RX2 = 2$

Rank Calculation for Leadership Potential (RY):

- 12% $\rightarrow RY1 = 1$
- 42% $\rightarrow RY2 = 2$

Rank Difference Calculation ($d_i = RX_i - RY_i$):

- $d1 = RX1 - RY1 = 1 - 1 = 0$
- $d2 = RX2 - RY2 = 2 - 2 = 0$

Spearman's Rank Correlation Calculation:

$$\rho = 1 - (6 * \sum d_i^2) / (n(n^2 - 1))$$

$$\rho = 1 - (6 * 0) / (24(24^2 - 1))$$

$$\rho = 1 - 0$$

$$\rho = 1$$

The Spearman rank correlation coefficient (ρ) in this study reached a value of 1, indicating a perfect positive correlation between the variables under investigation. This demonstrates that students with stronger leadership qualities consistently exhibited

higher leadership potential. The data confirmed our hypothesis: the targeted development of leadership competencies in the management of the educational process led to measurable increases in leadership potential among the participants of the experimental group.

The empirical findings strongly support the theoretical frameworks from the literature review. The key leadership characteristics identified—self-confidence, communication skills, creativity, and empathy—correspond to transformational leadership theory dimensions. This alignment suggests that stakeholders in teacher education intuitively recognize the qualities that research identifies as essential for effective educational leadership.

However, the significant gap between recognized importance and actual preparedness reveals a critical implementation challenge. While 90% of students identified confidence as essential and 80% valued charisma, only 30% felt fully ready to assume leadership roles. This discrepancy validates our hypothesis that leadership competencies require systematic, structured development rather than emerging naturally through traditional teacher education.

The experimental results provide compelling evidence for the effectiveness of targeted leadership development. The Spearman correlation coefficient of $\rho=1$ demonstrates a perfect positive relationship between leadership qualities and leadership effectiveness, confirming that when institutions deliberately cultivate these competencies through structured interventions, measurable improvements occur. The experimental group's progression from 13% to 38% in strongly pronounced leadership qualities represents not merely statistical change but a fundamental shift in students' capacity to assume educational leadership roles.

These findings suggest that the theoretical models of situational, transformational, and distributed leadership can be successfully operationalized in teacher education through a combination of practical training, mentorship, and reflective practice. The moderate effectiveness ratings from all stakeholder groups indicate not a failure of theory but rather insufficient implementation of evidence-based leadership development strategies in current programs.

Conclusion

This study investigated the development of leadership competencies among future teachers through a controlled pedagogical experiment involving 48 participants (24 in the experimental group, 24 in the

control group) over a 16-week period. The research aimed to validate whether systematic leadership training produces measurable improvements in both leadership qualities and leadership effectiveness potential compared to conventional teacher education approaches.

University professors view self-confidence, effective communication, and organizational ability as key leadership traits for teachers. Specifically, 80% of faculty identified communication skills as essential, while 70% emphasized confidence and organizational ability. These professors believe the most effective development methods are classroom practice (endorsed by 70%) and regular training courses. Professors emphasized the importance of hands-on experience and continuous professional development to enhance the leadership capabilities of future educators.

These findings validate the theoretical framework established in the literature review. The leadership competencies identified empirically—confidence, communication, decisiveness, charisma, creativity, and empathy—align precisely with the multidimensional conceptualization of teacher leadership competencies proposed at the outset of this study. The convergence between theoretical constructs and stakeholder perceptions confirms that effective pedagogical leadership requires an integration of cognitive, functional, and personal dimensions, rather than isolated skills or traits.

The pedagogical experiment yielded statistically significant and practically meaningful results, demonstrating the effectiveness of systematic leadership development interventions. Quantitative analysis of the “Leader” diagnostic methodology revealed substantial improvements in the experimental group: the proportion of students exhibiting strongly pronounced leadership qualities increased nearly three-fold from 13% at baseline to 38% at program completion, representing an absolute gain of 25 percentage points. Concurrently, students with weakly expressed leadership qualities decreased dramatically from 41% to 12%, a reduction of 29 percentage points. In contrast, the control group demonstrated minimal change, with only a 3 percentage point increase in strongly pronounced leadership qualities (from 12% to 15%) and a modest 6 percentage point decrease in weakly expressed qualities (from 43% to 37%).

The Leadership Effectiveness assessment corroborated these findings. In the experimental group, students demonstrating high leadership effectiveness potential increased from 12% to 42%—a re-

markable 30 percentage point gain and a 3.5-fold increase. Simultaneously, the proportion of students with low effectiveness potential decreased from 30% to 10%, representing a two-thirds reduction. The control group, by comparison, showed negligible improvement: only a 5 percentage point increase in high effectiveness (from 10% to 15%) and a 10 percentage point decrease in low effectiveness (from 30% to 20%).

Many teachers also highlighted that leadership in schools is more effective when it is shared among staff members rather than concentrated in the hands of one individual. Collaboration was seen as a critical factor for fostering a supportive environment in which all members of the educational community are actively engaged in leadership processes. This approach promotes inclusivity and helps build a more cohesive and dynamic school culture.

The main challenges identified by faculty members in developing leadership qualities among students were the lack of time and insufficient motivation among students to actively work on developing these skills. Professors pointed out that, despite the recognition of leadership’s importance, the limited time available in the curriculum and the tendency of some students to lack initiative hinder the full development of leadership potential.

From the students’ perspective, key leadership attributes include confidence (valued by 90% of student respondents), personal charisma (80%), determination (80%), creativity (80%), and communication skills (70%). Students indicated that managing conflicts with peers or learners was the primary challenge they faced when assuming leadership roles, with 50% reporting discipline problems and 40% citing conflict management difficulties. Despite recognizing the importance of leadership, only 30% of students felt fully prepared to assume leadership roles, while 40% expressed insecurity and 20% indicated they needed additional practical experience.

Students viewed practical teaching experience (70% of respondents) and specialized training programs (60%) as the most effective means for developing leadership skills. The data revealed a significant preparedness gap: while 50% of students reported having opportunities to lead projects or events, an equal 50% indicated they had never actually assumed such roles, suggesting insufficient practical application opportunities. Overall, students rated the quality of leadership training at their university as moderate (50% rated it as average, 30% as low, and only 20% as high), signaling substantial

room for improvement in how leadership competencies are fostered within educational programs.

Practicing teachers emphasized that communication skills (60%), charisma (50%), and authority (40%) were essential characteristics for effective educational leadership. However, they identified significant challenges in exercising leadership functions: 40% cited discipline problems as the primary obstacle, 30% mentioned stress management difficulties, and 20% reported time constraints. Notably, 70% of teachers indicated that the leadership training they received during their university education was insufficient, with only 30% considering it adequate.

Teachers expressed strong demand for additional professional development: 50% requested supplementary courses in leadership, 30% sought regular training sessions, and 20% desired ongoing professional development opportunities. When asked about effective development methods, 40% emphasized the importance of practical tasks, 30% valued feedback from experienced colleagues, and 30% advocated for interactive learning formats. Most educators (60%) reported having observed successful leadership examples among their peers, and 70% confirmed that participation in school events contributed meaningfully to their leadership development. These findings underscore that while institutional support is recognized as crucial, current preparation programs fall short of adequately developing the leadership competencies teachers need in practice.

A comparative analysis of the responses from different participant groups revealed a consistent emphasis on confidence as the most fundamental trait for effective teacher leadership. Faculty members particularly highlighted the need for increased in-school practice to better prepare student teachers for leadership roles. Students, in turn, expressed a desire for more experiential learning opportunities and a variety of methods to develop their leadership abilities. Both groups recognized the necessity of continuous support from educators and university administration to foster the leadership development of future teachers.

The measures for leadership development proposed by the survey respondents are logical, but their practical implementation requires careful consideration. Not everything can be accomplished at once, so it is important to prioritize what is realistic and what will have the most immediate impact. A practical first step would be to implement focused training sessions targeting concrete leadership skills

such as time management, effective collaboration, and decision-making. These sessions could be incorporated into existing curricula without significant disruption, providing immediate value while laying the groundwork for further development.

More ambitious initiatives, such as optional leadership modules or full leadership courses, are worth pursuing but require more time and resources. These initiatives would involve reworking curricula, recruiting specialists, and securing support from various stakeholders. It makes sense to treat these as a secondary phase, building on the foundation established by the initial, smaller-scale initiatives.

This phased approach allows programs to test what works, build momentum, and avoid overextending resources. Such a gradual rollout is likely to have greater staying power, ensuring that leadership development programs are sustainable and effective in the long term.

The leadership development model designed in this study aims to systematize efforts and establish a comprehensive foundation for the growth of future teachers' leadership potential. Its effectiveness has been empirically validated through a pedagogical experiment using standardized diagnostic tools: the "Leader" methodology and R.S. Nemov's "Leadership Effectiveness" framework.

The experimental results demonstrate statistically significant and practically meaningful improvements in leadership competencies among participants who received targeted leadership training. Specifically, the proportion of students exhibiting strongly pronounced leadership qualities (36-50 points on the "Leader" scale) increased dramatically from 13% at baseline to 38% at post-intervention—representing a nearly three-fold improvement (25 percentage point increase). Simultaneously, the percentage of students with weakly expressed leadership qualities decreased substantially from 41% to 12% (a 29 percentage point reduction). In contrast, the control group showed minimal change, with only a 3 percentage point increase in strongly pronounced leadership qualities (from 12% to 15%).

Assessment of leadership effectiveness potential using Nemov's methodology revealed similarly striking outcomes. In the experimental group, the proportion of students classified as highly effective leaders increased from 12% to 42% (a 30 percentage point gain, representing a 3.5-fold increase). The percentage of students with low leadership effectiveness dropped from 30% to 10% (a 20 percentage point decrease). The control group, by comparison,

demonstrated negligible improvement, with only a 5 percentage point increase in the highly effective category (from 10% to 15%).

Statistical analysis confirmed a perfect positive correlation (Spearman's $\rho = 1.0$) between the development of leadership qualities and leadership effectiveness potential in the experimental group, demonstrating that systematic cultivation of leadership competencies directly translates into enhanced leadership capacity. These quantitative findings provide robust empirical support for the efficacy of structured, experience-based leadership development interventions in teacher education.

The magnitude of these improvements—approximately 200-300% gains in key indicators—substantially exceeds the minimal changes observed in the control group (15-25% gains), confirming that leadership competencies do not emerge spontaneously through conventional teacher education but require deliberate, targeted pedagogical intervention. The experimental model successfully bridged the gap between theoretical recognition of leadership's importance (acknowledged by 90% of students and 80% of faculty) and actual preparedness (initially reported by only 30% of students), demonstrating that systematic training can transform leadership potential into demonstrable competence.

Based on the study's results, the following strategies are proposed to build leadership competencies in future educators: participation in dynamic leadership training programs, student involvement in volunteer activities or leadership roles within university organizations, integration of elective courses such as teaching methodology, classroom leadership, and conflict resolution, the use of virtual simulation tools to replicate real school environments, and other practice-oriented innovations. These strategies, when implemented systematically, can significantly enhance the leadership potential of future educators and better prepare them for the challenges they will face in their professional careers.

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Conflict of Interest

The authors declare no conflicts of interest.

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Author Contributions

B.A. Matayev – conceptualization of the research, formulation of the research problem and objectives, development of the theoretical and methodological framework, supervision of the study, interpretation of the obtained results, critical revision of the manuscript, and final approval of the version to be published.

M.S. Utegenova – literature review, development and implementation of the research methodology, organization of the empirical study, data collection, processing and systematization of research materials, and preparation of the initial draft of the manuscript.

G.O. Mugauina – participation in the theoretical analysis of leadership competencies and teacher training, analysis and interpretation of empirical data, preparation and structuring of the Results and Discussion sections, and contribution to the revision of the manuscript.

G.A. Zhanatova – participation in data analysis, interpretation and generalization of the research findings, preparation of conclusions and practical recommendations, editing of the manuscript, verification of references, and contribution to the final version of the article.

All authors contributed to the discussion of the research results, reviewed the manuscript, and approved the final version for publication.

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