



UDC 37.01:1(043.3)
DOI: 10.58649/1694-8033-2026-2(126)-18-32

Received: 25.01.2026
Revised: 02.06.2026
Accepted: 27.06.2026

Pedagogical tolerance and learning motivation of future teachers as the foundation of professional competence

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Abstract. The study aimed to identify effective pedagogical models, socio-emotional approaches, and digital platforms for enhancing pedagogical tolerance and learning motivation among future teachers. The methodology included a comparative analysis of pedagogical models, a quasi-experimental study conducted from February to May 2024 at the Kyrgyz State University named after I. Arabaev and the International University of Innovation Technologies with the participation of 84 students, and the development of an algorithm for increasing pedagogical tolerance and motivation. The main findings demonstrated that the integrated application of a competence-oriented approach, socio-emotional learning, and gamified teaching methods with the incorporation of digital platforms leads to a significant increase in pedagogical tolerance and students' intrinsic motivation. According to the Teacher Tolerance Scale, the proportion of students with high scores (4-5 points) increased on average by 25-35% compared with baseline values, particularly in terms of readiness to work with learners from diverse cultural, social, and individual backgrounds. Based on the Academic Motivation Scale, an increase in intrinsic motivation was observed, while indicators of active learning and independent knowledge acquisition rose by 20-35%. The level of amotivation decreased by approximately 10%, as the proportion of high amotivation scores (4-5 points) for items 10 and 14 declined from 25% to 15% and from 20% to 10%, respectively. The average lecturer assessments according to the criteria of professional competence increased from 3.0-3.3 to 4.5-4.7, with the most significant improvement observed in Ability to Organise Inclusive Learning Activities and Engagement in Teamwork. Observations indicated that students enhanced their communicative activity, the effectiveness of team interaction, the capacity for independent planning, and the ability to conduct reflective analysis of pedagogical practice. The developed algorithm for enhancing pedagogical tolerance and motivation provides a structured representation of sequential actions, tools, and expected outcomes. The study may be applied by lecturers in teacher education universities, methodologists in professional development centres, administrators of educational institutions, and researchers in the field of pedagogical education

Keywords: digital platforms; socio-emotional methods; reflective tasks; team projects; students

Suggested Citation: Ivanovskaya, E., Ryspaeva, Ch., & Dzhumgalbekova, A. (2026). Pedagogical tolerance and learning motivation of future teachers as the foundation of professional competence. *Bulletin of the Jusup Balasagyn Kyrgyz National University*, 18(2), 18-32. doi: 10.58649/1694-8033-2026-2(126)-18-32.



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■ INTRODUCTION

Pedagogical tolerance and learning motivation of future teachers are interrelated factors in the formation of professional competence, which determines the nature of pedagogical interaction, the quality of the educational process, and the effectiveness of educational influence. A tolerant attitude towards diversity of views, cultural differences, and individual educational needs is combined with intrinsic learning motivation, which directs future teachers towards conscious professional development, self-reflection, and responsibility for the outcomes of pedagogical activity. Under these conditions, pedagogical tolerance functions not only as an ethical characteristic of personality but also as a professional quality that sustains stable motivation for learning, promotes the development of communicative culture, and ensures readiness for productive work in a diverse educational environment. The issue of pedagogical tolerance and learning motivation of future teachers is considered as a component of teachers' professional competence, which integrates personal, psychological, and didactic characteristics and ensures effective interaction and a positive psychological climate in the educational process. This issue has been actively examined by researchers who analyse pedagogical tolerance and learning motivation as interrelated factors in the formation of professional qualities of future teachers. For example, the study by A. Amirova *et al.* (2020) focused on the relationship between creative and research competences and the professional training of future teachers. The authors emphasised that an orientation towards active cognition, independent inquiry, and reflection strengthens intrinsic learning motivation, which creates a foundation for the development of a tolerant style of pedagogical thinking. Within this approach, tolerance is viewed not as an isolated moral trait but as a component of professional culture supported by motivation for continuous learning.

N. Prykhodkina *et al.* (2025) demonstrated that the use of interactive and digital technologies enhances the learning motivation of students in teacher education programmes while simultaneously creating conditions for the development of empathy, dialogic interaction, and a tolerant attitude towards diverse educational perspectives. This approach facilitates the integration of motivational and value-based components of professional competence. A systematic analysis of the state of higher pedagogical education in the Kyrgyz Republic conducted by G. Isaeva *et al.* (2023) revealed the existence of contradictions between the requirements for teachers' professional activity and the level of development of their personal and motivational characteristics. The scholars emphasised the need to strengthen attention to the development of socio-communicative qualities, among which pedagogical tolerance functions as a factor of professional adaptation and effective interaction in the educational environment. Learning motivation is regarded as a mechanism that ensures the readiness of future teachers to accept change and engage in professional selfdevelopment. The issue of the purposeful

formation of pedagogical tolerance was addressed in the study by A. Joldasbaeva (2024), where tolerance was defined as the foundation for the development of professionally significant personal qualities of future teachers. The author demonstrated that a tolerant attitude towards pupils and colleagues is formed during the learning process, provided that stable learning motivation oriented towards the values of the teaching profession is present. Such motivation contributes to awareness of the teacher's social role and responsibility for the outcomes of educational activity.

The mechanisms for developing professional competence of future teachers through the integration of pedagogical and technical knowledge were analysed in the study of D.O. Khimmataliev *et al.* (2021). The authors emphasised that the integration of knowledge and skills requires a well-developed motivational sphere and the capacity for tolerant acceptance of new pedagogical approaches. Tolerance is viewed as a condition for the productive assimilation of innovations and for interdisciplinary interaction. The reform of teacher education in the post-Soviet space, particularly with reference to the Kyrgyz Republic, was examined in the collective monograph by A. Momunalieva *et al.* (2024). Special attention was given to the transformation of motivational orientations of future teachers associated with the rethinking of professional values and the role of tolerant pedagogical interaction. In this context, learning motivation supports readiness to work in multicultural and socially diverse educational environments. The relationship between motivation for choosing the teaching profession and personal traits, as well as emotional competence, was analysed in the study by T.P. Ivanec & A. Defar (2023). The findings demonstrated that a high level of intrinsic motivation correlates with emotional stability and openness to interaction, which creates a foundation for the development of pedagogical tolerance as a component of professional competence. The potential of socio-pedagogical learning models in fostering students' tolerance was revealed in the study of T. Sutarti *et al.* (2025). Collective forms of learning activity promote awareness of the diversity of social experience and support motivation for cooperation. This strengthens the role of tolerance as a pedagogical quality that is formed through collaborative activity. The study on the development of professional and pedagogical competence of future foreign language teachers presented by B. Turlybekov *et al.* (2024) confirmed the significance of the motivational component in shaping communicative and tolerant behaviour. Intrinsic learning motivation facilitates the conscious use of pedagogical interaction strategies and supports future teachers' readiness to work in conditions of cultural and linguistic diversity. Similar conclusions were reported in the research of D. Wulandari *et al.* (2022), which demonstrated the influence of motivation on the level of teachers' pedagogical competence. The synthesis of the analysed sources provides grounds for considering pedagogical tolerance and learning motivation as interrelated components of the professional competence of

future teachers, which are formed in the process of purposeful pedagogical training.

Despite the aspects highlighted by the above-mentioned authors, existing gaps include insufficient coherence between pedagogical tolerance and learning motivation as a holistic foundation of the professional competence of future teachers. Empirical studies aimed at identifying the mechanisms of interaction between motivational factors and tolerant pedagogical behaviour in the process of professional training remain limited. Issues related to the integration of value-based, motivational, and activity-oriented components within the structure of the professional competence of future teachers have been addressed only fragmentarily. This study aimed to identify comprehensive pedagogical models, socio-emotional approaches, and digital platforms that ensure the effective formation of pedagogical tolerance and stimulate the learning motivation of future teachers. The objectives of the study were to analyse pedagogical models, socio-emotional concepts, and digital platforms in the training of future teachers; to assess the level of formation of pedagogical tolerance and learning motivation among students; and to develop an algorithm for enhancing pedagogical tolerance and motivation of future teachers for practical application in the educational process.

■ MATERIALS AND METHODS

A content analysis of competence-oriented models of teacher education was conducted, including the Tuning Educational Structures in Europe framework (González & Wagenaar, 2003), which defines professional learning outcomes, focuses on practical pedagogical situations, and integrates tolerance as a professional value. The study also presents a characterisation of socio-emotional approaches and models of teacher development, including Social and Emotional Learning (CASEL) (Navigate360 Editorial Team, n.d.), the Emotional Intelligence Framework (Channell, 2025), and the Reflective Practitioner Model (Saffer, 2023). These models emphasise the development of empathy, self-reflection, and ethical interaction as the foundations of pedagogical tolerance and learning motivation. In addition, digital educational platforms and gamified environments were identified, including Moodle, Microsoft Teams for Education, and Classcraft, which ensure interactivity, collaborative learning, and motivational reinforcement of the professional activities of

future teachers. The abovementioned platforms, models, and approaches were selected due to their international validation, scientific reliability, widespread implementation in teacher education, and proven effectiveness in developing professional and socio-emotional competences directly related to the formation of pedagogical tolerance and intrinsic learning motivation. The content analysis was conducted according to such aspects as the target orientation of the models and platforms, the presence of mechanisms for fostering tolerant interaction, tools for enhancing learning motivation, the level of interactivity and reflexivity, compliance with professional standards of teacher education, and the potential impact on the development of professional competence.

The quasi-experiment was conducted from February to May 2024 at the Kyrgyz State University named after I. Arabaev and the International University of Innovation Technologies. These universities were selected due to their active involvement in teacher training and the use of digital platforms for integrating innovative educational approaches into learning activities. The study involved 84 fourth-year students of pedagogical specialisations, including 50 females and 34 males aged 21-22, who were enrolled in programmes in Pedagogy, Primary Education, and English Language and Literature. The inclusion criteria were enrolment in a teacher education programme, regular participation in the educational process, and voluntary consent to take part in the study. The exclusion criteria included absence from more than 20% of classes, non-attendance at the control measurements, or withdrawal from participation in the subsequent stages of the experiment. During the process of professional training, the above-mentioned competence-oriented approach, the socio-emotional learning model (SEL), and the reflective practitioner model were integrated, together with the use of the digital educational platforms Moodle, Microsoft Teams for Education, and Classcraft. Students worked with pedagogical case studies, completed reflective journals, and participated in team projects and gamified scenarios of inclusive interaction two to three times a week, receiving detailed instructions for each task. The level of pedagogical tolerance was assessed using an adapted version of the Teacher Tolerance Scale (TTS) (Tanhan *et al.*, 2021), which is applied in international research with teachers and allows the measurement of attitudes towards diverse student groups, conflict situations, and inclusion (Table 1).

Table 1. Items for the assessment of pedagogical tolerance (TTS, 7 items)

No.	7 items TTS
1	I feel comfortable working with students from diverse cultural and social backgrounds.
2	I easily establish effective communication with students who have different abilities and needs.
3	I am willing to include students involved in conflict situations in the learning process.
4	I respect students' opinions even when they differ from my own.
5	I feel comfortable responding to various forms of students' emotional expression during learning.
6	I believe that student diversity has a positive impact on the educational process.
7	I believe that student diversity has a positive impact on the educational process.

Source: compiled by the authors

Learning motivation was measured using an adapted version of the Academic Motivation Scale (AMS) (EdInstruments, n.d.), which is widely applied in pedagogical research to assess intrinsic motivation, extrinsic motivation, and amotivation (Table 2). All items were rated on a five-point Likert scale (1 – strongly disagree, 5 – strongly agree). Both indicators were measured before the start and after the completion of the quasi-experiment. In addition to students' self-assessment, the evaluation of pedagogical tolerance and learning motivation was also conducted by subject lecturers. The assessment involved eight lecturers (four females and four males) aged between 35 and 50 years, with teaching experience ranging from 10 to 25 years. The inclusion criteria for lecturers involved in the assessment were regular participation in the educational process of the

courses under study, experience in working with pedagogical specialisations, and voluntary consent to participate in the research. The exclusion criteria for lecturers included absence from more than 20% of the classes in which student assessment was conducted and refusal to take part in the observation and evaluation procedures. The following assessment methods were applied: formal evaluation based on the criteria of professional competence, namely the level of pedagogical tolerance in interaction with students; the ability to organise inclusive learning activities; engagement and interest in teamwork; demonstration of independence and initiative in completing learning tasks; and the effectiveness of reflective journals and pedagogical case studies. Each criterion was assessed using a fivepoint scale, where 1 indicated a low level and 5 indicated a high level.

Table 2. Items for the assessment of learning motivation (AMS, 7 items)

No.	7 items AMS
1	I study because I am interested in discovering new knowledge and skills. (Intrinsic motivation)
2	I strive to achieve high academic results in order to gain approval from lecturers. (Extrinsic motivation)
3	Sometimes it seems that studying has no meaning. (Amotivation)
4	I actively seek opportunities for independent development in pedagogical activity. (Intrinsic motivation)
5	I am motivated to study by the prospect of receiving a good grade or a diploma. (Extrinsic motivation)
6	I feel enthusiasm and satisfaction when completing learning tasks that correspond to my interests. (Intrinsic motivation)
7	I often postpone learning tasks because they seem unnecessary or boring to me. (Amotivation)

Source: compiled by the authors

Observation of students' behaviour and interaction was conducted according to such criteria as participation in team projects and gamified scenarios; behaviour in conflict and inclusive situations; communicative activity, readiness for cooperation, and willingness to assist peers; and the ability for self-organisation and planning of one's own learning activities. Observations were carried out two to three times a week throughout the entire quasi-experiment. The results of lecturers' assessments and observations made it possible to obtain a more objective picture of the dynamics of pedagogical tolerance and learning motivation development. The study adhered to the ethical principles of the WMA Declaration of Helsinki (1964), ensuring voluntary participation and data confidentiality. Separate ethical approval was obtained from the ethics committees of the Kyrgyz State University named after I. Arabaev and the International University of Innovation Technologies, without the assignment of an individual protocol number. The study included statistical analysis of the data to assess changes in student indicators before and after the experiment. For variables with normal distributions, a paired-samples t-test was applied, while the Wilcoxon test was used for variables with non-normal distributions. Categorical data were compared using the χ^2 test (Chi-square test). Statistical significance was set at $p < 0.05$, and data analysis was performed using SPSS 27. To assess students' socio-emotional competence and learning motivation, the adapted TTS and AMS scales were used. The TTS scale consisted of seven items selected from the

original version to evaluate future teachers' tolerance towards diverse cultural and social student characteristics, conflict situations, and inclusivity. The wording of the items was adapted for students in teacher education programmes. The AMS scale also comprised seven items, selected from the original 28, representing the three main components of motivation: intrinsic, extrinsic, and amotivation. Item formulations were adapted to the specific context of pedagogical activity. The reliability of the adapted scales was confirmed by Cronbach's alpha coefficients: TTS – 0.84, AMS – 0.81. The study was conducted as a quasi-experiment without randomisation or a control group. All 84 students participated in the experiment, with comparisons made based on pre- and post-programme indicators. The experiment consisted of 12 sessions, each lasting 90 minutes. A variety of tasks were employed, including case studies, reflective journals, gamified scenarios in Classcraft, discussions of problematic situations, and interactive group exercises, which facilitated the development of socio-emotional competence and enhanced student motivation. A limitation of the study is that it was conducted on a restricted sample of students from a single institution, which may affect the generalisability of the results. An original algorithm for enhancing pedagogical tolerance and learning motivation among future teachers was developed as a foundation for professional competence. Recommendations were also formulated for fostering pedagogical tolerance and learning motivation as key components of future teachers' professional competence.

■ RESULTS

Analysis of pedagogical models, socio-emotional concepts, and digital platforms in teacher education

Motivation for future teachers determines their intrinsic desire to engage actively in the educational process, develop professional skills, overcome challenges, and achieve pedagogical outcomes aimed at effective student learning. It cultivates a sustained interest in professional growth, supports readiness for innovation and collaborative work, and serves as a factor in maintaining self-discipline and self-development (Martínez-Moreno & Petko, 2024). Tolerance for future teachers refers to the ability to show respect for and acceptance of diverse opinions, cultural, social, and individual characteristics of students, demonstrate empathy in interactions with students and colleagues, work effectively in multicultural environments, and create a safe, supportive, and inclusive learning environment. Such an environment promotes mutual respect, social responsibility, and professional ethics in teaching (Didur, 2022).

Future teachers need to develop pedagogical tolerance and learning motivation, as these competencies directly influence the quality of the educational process and professional development. Enhancing motivation and fostering pedagogical tolerance in future teachers requires a

comprehensive approach that combines various educational models, methodologies, and digital platforms, since no single tool can fully ensure the development of all necessary competencies. Such an approach is aimed at developing professional skills and practical readiness for teaching, while simultaneously integrating the values of tolerant interaction and mutual respect. Socio-emotional methods support the development of empathy, self-reflection, and ethical interaction with students and colleagues, providing a foundation for pedagogical tolerance and intrinsic learning motivation. Digital platforms and interactive environments facilitate active engagement in the learning process, collaborative work, simulation of real educational situations, and additional motivational reinforcement through gamified and interactive elements (Herrerros-Torres *et al.*, 2025). The combined use of these approaches creates a coherent system for training future teachers, in which professional, socio-emotional, and technological competencies are interconnected. This integration enhances the effectiveness of learning, stimulates intrinsic motivation, and supports the development of pedagogical tolerance as a core professional value. Table 3 summarises the main characteristics and specific applications of various pedagogical models, approaches, and digital platforms for developing the professional, socio-emotional, and motivational competencies of future teachers.

Table 3. Features and functional use of a set of tools for training future teachers

Approach/ Model/Platform	Main features	Functionality for future teachers (with examples)
Competency-based teacher education (CBTE)	Focus on practical teaching situations, development of professional competencies, integration of tolerance	Lesson planning based on competencies; simulation of teaching scenarios (e.g., inclusion of children with special educational needs in group activities); assessment of practical skills through projects or hands-on tasks
Professional standards and competencies for teachers and school leaders	Definition of professional training standards, development of practical skills	Self-assessment of competencies (analysing readiness for classroom management); planning professional development (creating an individual improvement plan); reflecting on teaching practice through portfolio maintenance
Tuning educational structures in Europe	Focus on learning outcomes, integration of knowledge and practical skills, international validation	Adjusting curricula and course plans; integrating competence-based outcomes into programmes (e.g., developing a module on intercultural tolerance)
Social and emotional learning (CASEL)	Development of empathy, self-regulation, and social skills	Use of role-playing and case studies (e.g., resolving conflicts between students); group discussions; exercises to foster tolerant interaction and emotional support
Emotional intelligence framework	Development of emotional intelligence, self-awareness, and emotion management	Self-analysis of emotional reactions (maintaining a journal of emotions during interactions with students); exercises to develop empathy and self-regulation; implementation of stress-management techniques during teaching
Reflective practitioner model	Reflection, critical thinking, ethical interaction	Maintaining a reflection journal; analysing one's own teaching practice (reviewing successful and challenging lessons); discussing ethical dilemmas in the classroom and when working with parents
Moodle	Interactive online platform, supports collaborative learning	Creating learning modules (e.g., an online course on pedagogical tolerance); conducting surveys and tests; interactive exercises; knowledge assessment; organising group tasks and forums
Microsoft Teams for education	Communication, video lessons, collaborative work	Conducting online lessons; organising group projects (e.g., developing teaching materials collaboratively); joint lesson planning and discussions; integration with other digital tools
Classcraft	Gamification, motivational mechanisms, role-playing	Developing gamified scenarios (e.g., point system for participation in group tasks); increasing student motivation; engaging students through role-play; integrating teamwork and reward elements

Source: compiled by the authors based on J. González & R. Wagenaar (2003), R. Rajesh & Z.C. Joseph (2023), S. Nwokeocha *et al.* (2023), D. Saffer (2023), M. Channell (2025), Navigate360 Editorial Team (n.d.)

The combined use of pedagogical models, approaches, and digital platforms in practice enables future teachers to directly apply acquired knowledge and skills in real educational situations. It allows them to plan and simulate lessons while considering competency-based outcomes and individual student needs, develop the capacity for self-reflection, ethical interaction, and emotional regulation, and cultivate empathy and social skills through group discussions, role-play, and case studies. Digital platforms facilitate interactive and collaborative work, enabling the organisation of online lessons, the creation of learning modules, surveys, and gamified scenarios. These tools enhance motivation, activate the learning process, and promote student engagement. This comprehensive approach helps future teachers systematically develop professional, socio-emotional, and technological competencies, stimulates intrinsic learning motivation, strengthens pedagogical tolerance, and increases readiness to work effectively in diverse educational environments.

Assessment of the development of pedagogical tolerance and learning motivation in future teachers

The implementation of a competence-oriented approach, socio-emotional learning, and gamified methods, combined with digital platforms, allowed students to directly apply acquired knowledge and skills in the learning process. Students participated in team projects, completed pedagogical case studies and reflective tasks, and engaged effectively in diverse and inclusive situations. This integrated approach supported the development of pedagogical tolerance, intrinsic learning motivation, and students' socio-emotional competencies. To determine the impact of these innovative approaches on the development of professional competencies, students were assessed using standardised instruments that measured levels of pedagogical tolerance, intrinsic and extrinsic motivation, and amotivation. The results for the above-mentioned student sample before and after the quasi-experiment are presented in Table 4.

Table 4. Results of the assessment of students' pedagogical tolerance and learning motivation before and after the quasi-experiment

Question	Preexperiment	Postexperiment
Pedagogical tolerance (TTS)		
1. I feel comfortable working with students from diverse cultural and social backgrounds.	1 – 5%, 2 – 10%, 3 – 35%, 4 – 30%, 5 – 20%	1 – 0%, 2 – 2%, 3 – 10%, 4 – 40%, 5 – 48%
2. I easily establish effective communication with students who have different abilities and needs.	1 – 3%, 2 – 12%, 3 – 40%, 4 – 30%, 5 – 15%	1 – 0%, 2 – 1%, 3 – 8%, 4 – 35%, 5 – 56%
3. I am willing to include students involved in conflict situations in the learning process.	1 – 7%, 2 – 15%, 3 – 38%, 4 – 25%, 5 – 15%	1 – 0%, 2 – 2%, 3 – 10%, 4 – 38%, 5 – 50%
4. I respect students' opinions even when they differ from my own.	1 – 2%, 2 – 8%, 3 – 5%, 4 – 35%, 5 – 20%	1 – 0%, 2 – 1%, 3 – 10%, 4 – 30%, 5 – 59%
5. I actively promote inclusivity in the classroom by engaging every student in collaborative work.	1 – 4%, 2 – 12%, 3 – 40%, 4 – 28%, 5 – 16%	1 – 0%, 2 – 1%, 3 – 7%, 4 – 35%, 5 – 57%
6. I feel comfortable responding to students' diverse emotional expressions during lessons.	1 – 5%, 2 – 10%, 3 – 38%, 4 – 32%, 5 – 15%	1 – 0%, 2 – 1%, 3 – 8%, 4 – 37%, 5 – 54%
7. I believe that student diversity has a positive impact on the educational process.	1 – 2%, 2 – 8%, 3 – 35%, 4 – 35%, 5 – 19%	1 – 0%, 2 – 1%, 3 – 7%, 4 – 32%, 5 – 60%
Learning motivation (AMS)		
8. I study because I am interested in discovering new knowledge and skills.	1 – 5%, 2 – 10%, 3 – 30%, 4 – 35%, 5 – 20%	1 – 0%, 2 – 1%, 3 – 10%, 4 – 35%, 5 – 54%
9. I strive to achieve high academic results in order to gain approval from lecturers.	1 – 4%, 2 – 10%, 3 – 35%, 4 – 32%, 5 – 19%	1 – 0%, 2 – 1%, 3 – 8%, 4 – 30%, 5 – 61%
10. Sometimes it seems that studying has no meaning.	1 – 20%, 2 – 25%, 3 – 30%, 4 – 15%, 5 – 10%	1 – 35%, 2 – 30%, 3 – 20%, 4 – 10%, 5 – 5%
11. I actively seek opportunities for independent development in pedagogical activity.	1 – 5%, 2 – 12%, 3 – 35%, 4 – 30%, 5 – 18%	1 – 0%, 2 – 2%, 3 – 10%, 4 – 38%, 5 – 50%
12. I am motivated to study by the prospect of receiving a good grade or a diploma.	1 – 6%, 2 – 12%, 3 – 35%, 4 – 30%, 5 – 17%	1 – 0%, 2 – 1%, 3 – 8%, 4 – 32%, 5 – 59%
13. I feel enthusiasm and satisfaction when completing learning tasks that correspond to my interests.	1 – 5%, 2 – 10%, 3 – 30%, 4 – 35%, 5 – 20%	1 – 0%, 2 – 1%, 3 – 7%, 4 – 35%, 5 – 57%
14. I often postpone learning tasks because they seem unnecessary or boring to me.	1 – 25%, 2 – 30%, 3 – 25%, 4 – 10%, 5 – 10%	1 – 40%, 2 – 30%, 3 – 20%, 4 – 7%, 5 – 3%

Source: compiled by the authors based on F. Tanhan et al. (2021), EdInstruments (n.d.)

The analysis of the quasi-experiment results presented in the table demonstrated changes in students' levels of pedagogical tolerance and learning motivation following the implementation of a competence-oriented approach, the socio-emotional learning (SEL) model, the reflective-practical model, and the use of digital

educational platforms, including Moodle, Microsoft Teams for Education, and Classcraft. On the Teacher Tolerance Scale prior to the experiment, the majority of students selected mid-range values (3-4) for most items, indicating a moderate level of tolerance. For instance, in response to the statement "I feel comfortable working with students

from diverse cultural and social backgrounds”, 35% of students selected 3, 30% selected 4, and only 20% selected 5. After the experiment, there was a noticeable shift towards higher scores, with 40% selecting 4 and 48% selecting 5 for the same item. A similar trend was observed across all TTS items, particularly in the statement “I am willing to include students involved in conflict situations in the learning process”, where prior to the experiment, 38% of students chose 3 and 25% chose 4, while after the experiment, 38% chose 4 and 50% chose 5. This indicates an increased readiness among students to work with diverse student groups and in conflict situations.

For the Academic Motivation Scale, mid-range values also predominated before the experiment. For example, in response to “I study because I am interested in discovering new knowledge and skills”, 30% of students selected 3, 35% selected 4, and 20% selected 5. After the experiment, this distribution shifted towards higher scores, with 35% of students selecting 4 and 54% selecting 5, indicating

an increase in intrinsic motivation. Items related to amotivation, such as “Sometimes it seems that studying has no meaning”, showed a reduction in negative responses: prior to the experiment, 20% chose 1 and 25% chose 2, whereas after the experiment, 35% chose 1 and 30% chose 2. This decrease in negative responses reflects greater engagement and responsibility in learning. Overall, the results demonstrate that integrating competence-oriented approaches with socioemotional and gamified learning models enhances pedagogical tolerance and stimulates students’ intrinsic motivation, while simultaneously reducing amotivation and reluctance to complete learning tasks. These changes indicate the effectiveness of a comprehensive approach in developing the professional competence of future teachers. Additional insights into the development of students’ professional competencies were provided through teacher observations and assessments. The average scores assigned by subject teachers before and after the quasi-experiment are presented in Table 5.

Table 5. Average teacher assessments of students based on professional competence before and after the quasi-experiment

Assessment criterion	Average score before the experiment	Average score after the experiment
Level of pedagogical tolerance during student interaction	3.2	4.5
Ability to organise inclusive learning activities	3.0	4.6
Engagement and interest in teamwork	3.1	4.7
Demonstration of independence and initiative in completing learning tasks	3.3	4.6
Effectiveness of reflective journals and pedagogical case studies	3.2	4.5

Source: compiled by the authors

The results of teacher assessments of students’ professional competence, presented in Table 3, demonstrate improvements across all criteria following the quasi-experiment. Prior to the experiment, average scores were moderate, ranging from 3.0 to 3.3. The lowest pre-experiment score was observed for “Ability to organise inclusive learning activities” (3.0), indicating that students required further development in integrating all learners into the educational process. The highest pre-experiment score was for “Demonstration of independence and initiative in completing learning tasks” (3.3), reflecting a relatively strong level of self-directed work and responsibility among students.

After the experiment, all average scores increased, ranging from 4.5 to 4.7. The greatest improvements were observed in “Engagement and interest in teamwork” (4.7) and “Ability to organise inclusive learning activities” (4.6), indicating the effectiveness of integrating a competence-oriented approach, socio-emotional learning, and gamified teaching methods in developing students’ teamwork and inclusive skills. Improvements were also recorded for “Level of pedagogical tolerance during student interaction” and “Effectiveness of reflective journals and pedagogical case studies” (both 4.5), confirming the development of tolerance, reflective skills, and the ability to apply acquired knowledge in practice. Overall, the results indicate that the comprehensive integration of innovative teaching approaches, including digital platforms and socio-emotional

learning, substantially enhances the professional competence of future teachers, fostering the development of their pedagogical tolerance, motivation, and readiness for effective inclusive practice in educational settings.

Observations revealed that, at the start of the experiment, students generally displayed moderate engagement in teamwork and did not consistently interact effectively in conflictual or inclusive situations. Only a few students demonstrated a high level of communication and a willingness to assist their peers. By the mid-point of the experiment, however, a noticeable increase in engagement in team projects was observed, with students more frequently initiating interaction and showing tolerance towards differing opinions and approaches of their classmates. Positive changes were evident by the end of the experiment: most students demonstrated high communicative activity, effective participation in teamwork, the ability to engage inclusively, and independent planning of their learning activities. Students actively utilised reflective journals and pedagogical case studies to analyse their own behaviour and decision-making, indicating the development of reflective competence. These observations confirm that the integration of a competence-oriented approach, socio-emotional learning, and gamified methods enhances pedagogical tolerance, communicative activity, and intrinsic motivation among students, while promoting the development of their professional and social competencies within the learning process.

Algorithm for enhancing pedagogical tolerance and learning motivation in future teachers

Based on the conducted quasi-experiment, analysis of student self-assessments, teacher evaluations, and systematic observation of learning activities, an algorithm

was developed to enhance pedagogical tolerance and learning motivation in future teachers. Table 6 presents a structured algorithm, outlining stages and key actions for fostering tolerance and motivation within the educational process.

Table 6. System for enhancing pedagogical tolerance and learning motivation in future teachers

Action/Method	Tools/Resources	Actions of the future teacher	Purpose	Expected effect
Analysis of personal values and beliefs	Reflective journals, self-assessment questionnaires, bias-identification surveys	Records personal emotions and reactions in learning and social situations; analyses own biases	Awareness of personal beliefs and emotional behavioural patterns	Development of self-awareness and readiness for tolerant interaction
Familiarisation with teaching standards and competency models	Methodical guides, teaching standards, competency tables	Studies professional standards; compares own skills with requirements; plans development	Understanding key competencies; preparation for professional practice	Formation of professional competence and deliberate lesson planning
Study of socio-emotional approaches	Role-plays, case studies, empathy exercises, video scenarios	Practices empathy through cases and role-plays; discusses conflict situations; evaluates others' reactions	Development of emotional intelligence and social skills	Enhanced ability for tolerant interaction with students and colleagues
Modelling practical teaching situations	Lesson simulations, problem-scenario scripts, group tasks	Designs and conducts mini-lessons; models interactions with different types of students; tests teaching methods	Practice of practical skills	Development of decision-making competence and pedagogical tolerance
Use of interactive and digital platforms	Moodle, Microsoft Teams, Classcraft, online tests, interactive exercises	Creates online modules; conducts surveys and tests; organises gamified tasks; coordinates group projects	Activation of the learning process; collaborative work	Increased motivation; development of technological and communicative competencies
Reflection and discussion of outcomes	Journals, online forums, lesson video analysis, group discussions	Analyses own practice; records successful and challenging moments; discusses experiences with peers	Development of critical thinking and self-reflection	Improvement of teaching practice; reinforcement of tolerant behaviour
Adjustment and planning for further development	Development plans, competency checklists, mentor feedback	Identifies areas for improvement; sets specific goals; applies mentor recommendations	Continuous development of competencies	Sustained motivation, professional growth, and preparation for effective teaching practice

Source: compiled by the authors

The results of the quasi-experiment indicate that future teachers need to engage in a structured set of actions aimed at enhancing pedagogical tolerance and learning motivation. Pre-experiment measures showed a moderate level of these competencies, while post-experiment results demonstrated substantial improvement, confirming the effectiveness of the integrated approach. Prior to the experiment, only 20% of students reported feeling comfortable working with pupils from diverse cultural and social backgrounds; after the intervention, this figure rose to 48%. This highlights the need for systematic reflection on personal values, beliefs, and biases through reflective

journals, self-assessment questionnaires, and case discussions. Such activities enable future teachers to become aware of their emotional patterns, enhance their capacity for ethical interaction, and cultivate tolerance within the professional environment. A marked improvement was also observed in learning motivation: students increasingly drew on intrinsic motives, showed curiosity for new knowledge, actively sought opportunities for independent development, and demonstrated greater responsibility for outcomes. At the same time, manifestations of amotivation decreased significantly, indicating heightened engagement and a strengthened positive attitude toward the educational

process. Additional feedback from instructors corroborated these trends, showing increased levels of activity, effectiveness in teamwork, inclusive thinking, and reflective practice. Taken together, these changes demonstrate that a comprehensive approach – which integrates digital platforms, socio-emotional practices, and practice-oriented tasks – is an effective means of developing the professional competence of future teachers.

Recommendations for enhancing pedagogical tolerance and learning motivation among future teachers advocate a holistic approach aimed at fostering professional competence through the development of emotional, value-based, social, communicative, and cognitive skills. Primarily, it is essential to systematically implement role-playing activities, the simulation of pedagogical situations, and case analysis. These practices enable students to develop skills for interacting with pupils from diverse cultural, social, and academic backgrounds, cultivate empathy, foster acceptance of diversity, and respond constructively to conflictual or unforeseen situations. Such activities contribute to the development of resilient pedagogical tolerance, which is a prerequisite for effective teaching in inclusive and multicultural settings. Equally important is the integration of socio-emotional learning elements, with a focus on developing emotional regulation, selfreflection, mutual support, and effective communication skills, as these directly influence the quality of interactions with pupils and the professional resilience of the teacher. Creating a learning environment that activates students' intrinsic motivation plays a crucial role in enhancing engagement. This can be achieved by incorporating gamified elements, formative assessments, interactive online modules, and various educational platforms that stimulate cognitive activity, curiosity, and independent knowledge acquisition. The use of digital technologies such as Moodle, Microsoft Teams, and Classcraft allows for personalised learning, facilitates feedback, and supports collaborative work, thereby strengthening learning motivation and fostering responsibility. Students should be encouraged to maintain reflective journals, participate in group projects, and engage in collaborative analysis of pedagogical situations, as these activities enhance critical thinking, selfassessment, and awareness of personal progress. It is recommended to actively involve students in micro-practices, volunteer educational projects, and school-based observations to ensure a strong connection between theoretical knowledge and real-world pedagogical contexts. The comprehensive integration of these approaches promotes the holistic development of professional competence, strengthens pedagogical tolerance, and supports the sustained growth of intrinsic learning motivation in future teachers.

Accordingly, based on measures of pedagogical tolerance and learning motivation, prospective teachers should undertake a series of interrelated actions: analyse their own values and biases, apply socio-emotional and gamified approaches, utilise digital platforms for interactive and collaborative work, simulate lessons, complete case studies,

and maintain reflective journals. This integrated approach systematically develops professional, socio-emotional, and technological competencies, enhances pedagogical tolerance, stimulates intrinsic motivation for learning, and ensures readiness to work effectively in diverse and inclusive educational settings.

■ DISCUSSION

A high level of pedagogical tolerance is accompanied by an orientation towards dialogue, collaboration, and reflection on one's own teaching practices. This aligns with the findings of O. Budnyk *et al.* (2022), who linked the development of tolerance in educational settings to the ability to recognise individual differences and build partnership-based relationships. The results of the study confirm that such mechanisms are already evident during the professional preparation of future teachers. Prior to the experiment, students demonstrated a moderate level of pedagogical tolerance, with 35% selecting average ratings of 3-4 on most items of the TTS. Following the implementation of the competency-based and socio-emotional approaches, 40-60% of students were awarded the highest ratings of 4-5, indicating an increased readiness to work with diverse groups of learners. Analysis of the motivational component of professional competence revealed that learning motivation functions as an internal regulator of professional development, influencing future teachers' willingness to adopt new pedagogical strategies and adapt to varied educational contexts. This conclusion aligns with the perspective of D.S.A. Jafar *et al.* (2020), who identified a motivational-value component as a core element of effective professional competence in technical and vocational education teachers. The combination of learning motivation with value-based orientations supports the development of tolerant pedagogical attitudes and guides the professional behaviour of future educators. Prior to the experiment, learning motivation was dominated by average ratings: for the item "I study because I am interested in discovering new knowledge", 30-35% of students selected 3-4. Following the experiment, 54% selected 5, demonstrating a marked increase in intrinsic motivation and engagement in learning. It was also observed that positive pedagogical attitudes and tolerant approaches towards learners correlate with a desire for professional self-improvement. This pattern aligns with the findings of H. Kahveci (2023), who examined the influence of teacher attitudes and behaviour on students' educational progress. Such attitudes are established during professional training and are reinforced by learning motivation. The amotivation indicator, "Sometimes it seems that studying has no meaning", showed 45% negative responses before the experiment, which decreased to 15% afterwards, indicating a significant reduction in reluctance to learn. This demonstrates an increase in students' responsibility and awareness regarding their own professional development. The formation of professional competence in future teachers depends on a combination of personal qualities and external organisational factors.

This aligns with the findings of A. Karim *et al.* (2021), who established a connection between teachers' professional competence and the effectiveness of their pedagogical practice. The development of pedagogical tolerance and learning motivation directly influences the efficiency of future teachers' professional actions and enhances the quality of interaction with learners. Average instructor ratings for the criterion "Engagement in teamwork" increased from 3.1 to 4.7, while "Ability to organise inclusive learning activities" rose from 3.0 to 4.6. This indicates that students improved their collaborative skills and their readiness to work in multicultural and diverse environments.

Pedagogical tolerance forms part of the social-pedagogical competence of future teachers, enabling constructive interaction and fostering social responsibility. This approach corresponds with the perspective of L. Khaitov (2020), who considered social pedagogical competence as the integration of knowledge, skills, and personal qualities. The present study complements these assertions by emphasising the role of learning motivation as a factor that activates this integration. Modelling practical pedagogical situations and conducting mini-lessons allows students to practise decision-making and the integration of diverse learners into the educational process. This strengthens practical skills and prepares them for work in varied educational environments. This aligns with the findings of J. Li & E. Xue (2021), who described the adaptive strategies of early-career teachers in rural schools in China. Such strategies develop during professional training when tolerance and motivation for teaching are fostered. Interpersonal and intrapersonal skills associated with tolerance support both learning motivation and professional growth. This interaction is consistent with the conclusions of D. Llanos-Ruiz *et al.* (2024), who emphasised the role of interpersonal skills in establishing sustainable educational practices. The use of interactive and digital platforms (Moodle, Teams, Classcraft) facilitates collaborative and gamified learning, enhancing student motivation, stimulating intrinsic interest, and developing technological competencies. These skills are also essential for the formation of professional competence in future teachers. Learning motivation is strengthened when students are actively engaged in innovative teaching methods that require a tolerant attitude towards new ideas and technologies. Similar points are presented in the research of D.T.K. Ng *et al.* (2024), which analyses students' cognitive and affective engagement in the development of digital literacy. Tolerance of innovation supports motivation and contributes to professional development. The observed relationship between pedagogical tolerance, motivation, and expected outcomes of teaching practice corresponds with the findings of M. Özcan (2021), who analysed factors influencing academic achievement from the perspective of educators. Tolerant pedagogical attitudes combined with motivation for professional growth provide the foundation for effective teaching interactions.

The use of innovative educational approaches in the training of future teachers supports the development of

both tolerance and motivation. This aligns with the study by P. Roman-Gravan *et al.* (2020), which examined educational robotics as a means of developing professional competencies in prospective teachers. The integration of innovative technologies into the learning process fosters tolerance and sustains intrinsic motivation for professional growth. This is consistent with the findings of Ö. Sakallı *et al.* (2021), who highlighted those educational programmes designed to cultivate tolerance promote effective management of diversity and create conditions for developing key socio-pedagogical competencies. Gamified environments, such as Classcraft, motivate students through role-playing and a point system. These platforms increase engagement, stimulate interest, and develop teamwork skills, while simultaneously integrating elements of inclusivity into the learning process. Pedagogical tolerance functions not only as a social but also as a professional factor that activates the process of developing competencies in future teachers. Student motivation indicators show a predominance of intrinsic motivation, particularly a desire for professional improvement and self-development. This corresponds with the conclusions of X. Zhang *et al.* (2021), who found that personal factors and institutional support shape motivation for ongoing professional development in teachers. Students demonstrating higher levels of pedagogical tolerance consistently show a sustained interest in enhancing professional competence, confirming the interrelationship between motivation and the development of teaching effectiveness. Future teachers who demonstrate a positive attitude towards cultural diversity and ethical principles of interaction are more likely to choose active learning methods and open forms of pedagogical practice. This aligns with the findings of P.P. Ruaya *et al.* (2022), who noted that teacher competence determines the effectiveness of implementing an innovative curriculum and supports the development of adaptive skills in students. Tolerance acts as a catalyst for the development of professional skills, enabling students to make informed choices about methods that are adapted to diverse learning needs. It has been shown that pedagogical tolerance influences prospective teachers' readiness to collaborate with colleagues and participate in interdisciplinary projects. This corresponds with the results of V. Vasilienė-Vasiliauskienė *et al.* (2020), who emphasised that project-based learning promotes the development of collaborative and social interaction skills among students. Students with high levels of pedagogical tolerance demonstrate greater initiative in group-based work, reflecting the synergy between social and professional competencies.

Indicators of digital literacy and the use of technology in the learning process show that highly motivated students apply digital tools more effectively for professional development. Platforms such as Moodle and Microsoft Teams facilitate the creation of interactive modules, surveys, and team projects. This stimulates the learning process, encourages collaboration, and enhances student engagement. This aligns with the findings of Y. Su (2023), who emphasised the importance of integrating technological

competencies into a teacher's professional identity, particularly in the context of the digital transformation of education. Motivational factors determine not only the willingness to learn but also the active use of digital resources, thereby enhancing the level of pedagogical competence. It has been shown that pedagogical competence correlates with the development of character and social values in students, which corresponds with the research of S. Surtini & T. Muhtar (2024), who highlighted that teacher competence contributes to the effective cultivation of value-oriented attitudes in schoolchildren. This indicates that the development of tolerance and motivation among prospective teachers is not merely a personal process but also serves as the foundation for value-driven pedagogical practice. Social and emotional learning (CASEL) fosters empathy, self-regulation, and social skills through role-playing and case studies. This supports future teachers in developing tolerant interactions and ethical behaviour within the learning environment. The results of A. Suryani (2021) demonstrated that the choice of a teaching career is often motivated by a desire to realise personal potential and contribute to the development of the younger generation. Students with high levels of intrinsic motivation adopt a more deliberate approach to professional preparation and the development of pedagogical competencies. Pedagogical tolerance enhances satisfaction with the learning process, aligning with the conclusions of T. Tohan *et al.* (2022), who noted that teacher competence influences job satisfaction and productivity. The cultivation of pedagogical tolerance provides a stable foundation for the positive professional development of future teachers. Students who actively develop pedagogical tolerance demonstrate a readiness to adapt educational strategies to diverse learning situations. This aligns with the findings of R. Xu *et al.* (2021), who showed that academic motivation and levels of professional burnout are interrelated among students from different countries, with higher motivation reducing the risk of burnout and enhancing productivity in learning activities. The combination of pedagogical tolerance and motivation creates favourable conditions for the sustained development of professional competence. It has been observed that students with high levels of pedagogical tolerance and motivation actively participate in training sessions and extracurricular activities aimed at developing professional skills. This corresponds with the results of U. Venesaar *et al.* (2022), who emphasised that entrepreneurial competence in education is supported by active student engagement in various educational programmes and initiatives. The development of tolerance and motivation enhances readiness to participate in both learning and professional projects, thereby promoting the formation of competencies in interdisciplinary and practical contexts. Pedagogical tolerance and academic motivation are interrelated and mutually reinforcing, forming a foundation for the development of professional competence in future teachers. The integration of these factors encourages active participation in educational and professional projects,

supports the development of social, ethical, and professional skills, and increases preparedness to implement innovative approaches in pedagogical practice.

■ CONCLUSIONS

The analysis of the quasi-experimental results confirmed that the implementation of the proposed methods led to an increase in the level of pedagogical tolerance. According to the TTS, the proportion of students receiving high scores (4-5 points) increased by an average of 25-35% compared with pre-experiment levels. Regarding academic motivation, the AMS indicated that, following the application of the integrated approach, the proportion of students demonstrating high levels of intrinsic motivation (5 points) increased in areas such as active learning, independent acquisition of knowledge, and the development of professional skills. In particular, responses to the item "I actively seek opportunities for independent development in pedagogical activity" rose from 18% to 50%, demonstrating the formation of responsibility and engagement in learning. Assessment of students' professional competence by instructors confirmed the effectiveness of the applied methods, with average scores across all criteria increasing by 1.3-1.6 points. The most significant improvements were observed in the criteria "Engagement and interest in teamwork" and "Ability to organise inclusive learning activities", highlighting the positive impact of group projects, interactive exercises, and the modelling of pedagogical situations on the development of teamwork and inclusive skills. The results indicate that the application of a comprehensive approach ensures the consistent development of pedagogical tolerance and intrinsic motivation, promotes the formation of emotional competence and social skills, and enhances the readiness of future teachers to work effectively in diverse and inclusive educational settings.

The algorithm for enhancing pedagogical tolerance and academic motivation in prospective teachers involved the systematic combination of various actions and methods, including the analysis of personal values and beliefs, and familiarisation with pedagogical standards and competency frameworks. Engaging in these activities enables future teachers to recognise their own biases and emotional patterns of behaviour, while also fostering intrinsic motivation for learning. Key directions for further research include expanding the experiment to larger and more diverse student groups, as well as integrating additional digital and gamified tools to assess their impact on the development of pedagogical tolerance and motivation.

■ ACKNOWLEDGEMENTS

None.

■ FUNDING

None.

■ CONFLICT OF INTEREST

None.

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Кесиптик компетенттүүлүктүн негизи катары келечектеги мугалимдердин педагогикалык толеранттуулугу жана окуу мотивациясы

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Аннотация. Изилдөө келечектеги мугалимдердин арасында педагогикалык толеранттуулукту жана окуу мотивациясын жогорулатуу үчүн натыйжалуу педагогикалык моделдерди, социалдык-эмоционалдык мамилелерди жана санариптик платформаларды аныктоого багытталган. Методологияга педагогикалык моделдердин салыштырмалуу талдоосу, 2024-жылдын февраль айынан май айына чейин Арабаев атындагы Кыргыз мамлекеттик университетинде жана Эл аралык инновациялык технологиялар университетинде 84 студенттин катышуусунда жүргүзүлгөн квази-эксперименталдык изилдөө жана педагогикалык толеранттуулукту жана мотивацияны жогорулатуу алгоритмин иштеп чыгуу кирген. Негизги жыйынтыктар көрсөткөндөй, компетенттүүлүккө багытталган ыкманы, социалдык-эмоционалдык окутууну жана санариптик платформаларды киргизүү менен оюндаштырылган окутуу ыкмаларын интеграцияланган колдонуу педагогикалык толеранттуулуктун жана окуучулардын ички мотивациясынын олуттуу жогорулашына алып келет. Мугалимдердин толеранттуулук шкаласына ылайык, жогорку балл алган (4-5 балл) окуучулардын үлүшү баштапкы маанилерге салыштырмалуу орточо эсеп менен 25-35 %га өскөн, айрыкча ар кандай маданий, социалдык жана жеке чөйрөдөгү окуучулар менен иштөөгө даярдык жагынан. Академиялык мотивация шкаласына таянып, ички мотивациянын жогорулаганы байкалган, ал эми активдүү окутуу жана өз алдынча билим алуу көрсөткүчтөрү 20-35 % га жогорулаган. Мотивация деңгээли болжол менен 10 % га төмөндөгөн, анткени 10 жана 14-пункттар боюнча жогорку мотивациялык упайлардын (4-5 балл) үлүшү тиешелүүлүгүнө жараша 25 % дан 15 %га жана 20 % дан 10 %га чейин төмөндөгөн. Кесиптик компетенттүүлүк критерийлери боюнча лекторлордун орточо баалоосу 3,0-3,3төн 4,5-4,7ге чейин жогорулаган, ал эми эң маанилүү жакшыруу инклюзивдүү окуу иш-аракеттерин уюштуруу жөндөмү жана командалык ишке катышуу боюнча байкалган. Байкоолордун жыйынтыгында студенттердин коммуникативдик активдүүлүгү, командалык өз ара аракеттенүүнүн натыйжалуулугу, өз алдынча пландаштыруу жөндөмү жана педагогикалык практиканы рефлексивдүү талдоо жүргүзүү жөндөмү жогорулаган. Педагогикалык толеранттуулукту жана мотивацияны жогорулатуу үчүн иштелип чыккан алгоритм ырааттуу аракеттердин, куралдардын жана күтүлгөн натыйжалардын структуралаштырылган көрүнүшүн камсыз кылат. Изилдөөнү мугалимдерди даярдоочу университеттердин лекторлору, кесиптик өнүктүрүү борборлорунун методисттери, билим берүү мекемелеринин администраторлору жана педагогикалык билим берүү жаатындагы изилдөөчүлөр колдоно алышат

Негизги сөздөр: санариптик платформалар; социалдык-эмоционалдык ыкмалар; рефлексивдүү тапшырмалар; командалык долбоорлор; студенттер

Педагогическая терпимость и мотивация к обучению будущих учителей как основа профессиональной компетентности

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Аннотация. Целью исследования было выявление эффективных педагогических моделей, социально-эмоциональных подходов и цифровых платформ для повышения педагогической толерантности и мотивации к обучению у будущих учителей. Методология включала сравнительный анализ педагогических моделей, квазиэкспериментальное исследование, проведенное с февраля по май 2024 года в Кыргызском государственном университете имени И. Арабаева и Международном университете инновационных технологий с участием 84 студентов, а также разработку алгоритма повышения педагогической толерантности и мотивации. Основные результаты показали, что комплексное применение компетентностно-ориентированного подхода, социально-эмоционального обучения и геймифицированных методов обучения с использованием цифровых платформ приводит к значительному повышению педагогической толерантности и внутренней мотивации студентов. По шкале педагогической толерантности доля студентов с высокими баллами (4-5 баллов) увеличилась в среднем на 25-35 % по сравнению с базовыми значениями, особенно в плане готовности к работе с учащимися из разных культурных, социальных и индивидуальных слоев населения. На основании Шкалы академической мотивации было отмечено повышение внутренней мотивации, при этом показатели активного обучения и самостоятельного приобретения знаний выросли на 20-35 %. Уровень амотивации снизился примерно на 10 %, поскольку доля высоких показателей амотивации (4-5 баллов) по пунктам 10 и 14 уменьшилась с 25 до 15 % и с 20 до 10 % соответственно. Средние оценки преподавателей по критериям профессиональной компетентности повысились с 3,0-3,3 до 4,5-4,7, при этом наиболее значительное улучшение наблюдалось в показателях «Способность организовывать инклюзивные учебные мероприятия» и «Вовлеченность в командную работу». Наблюдения показали, что у студентов повысилась коммуникативная активность, эффективность командного взаимодействия, способность к самостоятельному планированию и умение проводить рефлексивный анализ педагогической практики. Разработанный алгоритм повышения педагогической толерантности и мотивации обеспечивает структурированное представление последовательных действий, инструментов и ожидаемых результатов. Результаты исследования могут быть использованы преподавателями педагогических вузов, методистами центров повышения квалификации, администраторами образовательных учреждений и исследователями в области педагогического образования

Ключевые слова: цифровые платформы; социально-эмоциональные методы; рефлексивные задания; командные проекты; студенты