

## IMPACT

OF INNOVATIVE TEACHING METHODS ON THE QUALITY OF HIGHER  
EDUCATION BASED ON KAZAKH ETHNOPEDAGOGY**IMPACTO DE LOS MÉTODOS DE ENSEÑANZA INNOVADORES EN LA CA-  
LIDAD DE LA ENSEÑANZA SUPERIOR BASADA EN LA ETNOPEDAGOGÍA  
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## ABSTRACT

The advancements in globalization, digitalization, and rapid technological progress have propelled humanity to a new stage of evolution. Higher education institutions are on the brink of significant transformations, necessitating universities to adapt to fresh requirements within a novel framework. Implementing education in higher educational establishments effectively mandates consideration of national educational traditions and the ethnopedagogical insights of diverse cultures. This study aims to pinpoint innovative methodologies in educational settings and propose updated criteria for their integration, aligning the outcomes with the state's needs. Given that all progressive teaching approaches prioritize learners (learner-centered), educators must adhere to the principles of ethnopedagogy. Ethnopedagogy plays a pivotal role in fostering an environment conducive to effective learning and the holistic development of students from various ethnic backgrounds. It facilitates the preservation and enhancement of ethnic identities, fostering a mindset of tolerance towards different cultures and ethnicities. Moreover, it cultivates an educational milieu where each student feels valued, embraced, and where their cultural heritage is esteemed.

**Keywords:** Ethnopedagogy, Innovative Teaching Methods, Higher Education, Science, Technology, Artificial Intelligence.

## RESUMEN

Los avances en la globalización, la digitalización y el rápido progreso tecnológico han impulsado a la humanidad a una nueva etapa de evolución. Las instituciones de enseñanza superior se encuentran al borde de importantes transformaciones, que obligan a las universidades a adaptarse a las nuevas exigencias en un marco novedoso. La implantación efectiva de la educación en los centros de enseñanza superior exige tener en cuenta las tradiciones educativas nacionales y las percepciones etnopedagógicas de las diversas culturas. El objetivo de este estudio es señalar las

metodologías innovadoras en los entornos educativos y proponer criterios actualizados para su integración, alineando los resultados con las necesidades del Estado. Dado que todos los enfoques pedagógicos progresistas dan prioridad a los alumnos (centrados en el alumno), los educadores deben adherirse a los principios de la etnopedagogía. La etnopedagogía desempeña un papel fundamental en el fomento de un entorno propicio para el aprendizaje eficaz y el desarrollo integral de los estudiantes de diversos orígenes étnicos. Facilita la preservación y la mejora de las identidades étnicas, fomentando una mentalidad de tolerancia hacia las diferentes culturas y etnias. Además, cultiva un entorno educativo en el que cada alumno se siente valorado, acogido y en el que se estima su patrimonio cultural.

**Palabras clave:** Etnopedagogía, Métodos innovadores de enseñanza, Educación Superior, Ciencia, Tecnología, Inteligencia artificial.

## INTRODUCTION

In the era of globalization and the advancement of science and technology, it presents a tough challenge for teachers to be able to create smart learners and able to compete in the business and industrial world. Educators are in charge of keeping their students focused and maintaining their interest in learning. It demands not just expertise, but also requires a level of creativity and innovation. Instead of using traditional teaching styles, where students are not interested in getting knowledge, educators worldwide have come up with innovative teaching methods in higher education that they can apply in the classroom.

Kazakh President Kassim-Zhomart Tokayev addressed pressing issues in the country's education system during the National Congress of Teachers: "A teacher is an authoritative professional. Being a teacher entails significant responsibility. The pedagogical community continues to work tirelessly for the sake of the country's bright future," said Tokayev. He also noted that "Education and science are the essential keys to success". "These are professionals, who can integrate the most advanced techniques into training. They can represent the leadership of educational organizations of a new type in the future. He also pointed out that the use of modern technologies will allow us to quickly and effectively modernize the education system. We must develop the education sector by the best international standards," believes the head of state.

The role of upbringing is expanding in the educational system of Kazakhstan (Gribkova, 2022). A new model of education is designed, and it is based on life-long learning

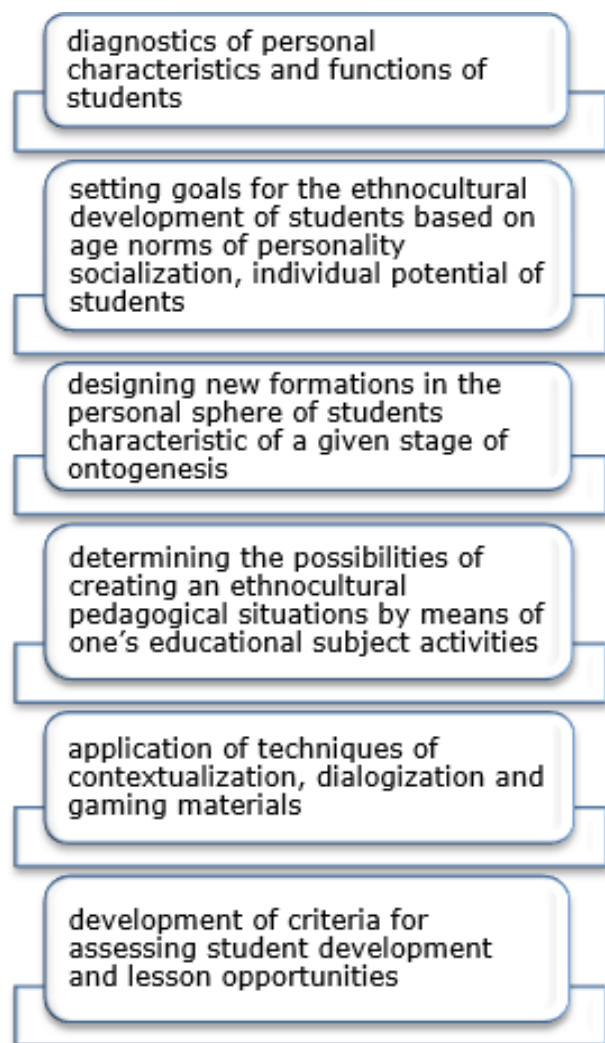
and the development of creative abilities. Scientific and methodological support of the educational process is being carried out. It is vital to attach the classical traditional education system with an innovative one, and it will improve the quality of the education system. Joining the Bologna process Kazakhstan gained new opportunities, taking into account advanced technologies and training systems. All higher education institutions have integrated credit technology, with 38 institutions adopting double-degree programs and 42 implementing distance learning. The primary objectives of the Bologna process include enhancing the approach to higher education, elevating the quality and attractiveness of European higher education, promoting student and teacher mobility, and facilitating the successful employment of college graduates based on academic degrees and qualifications (Gafurov et al., 2020).

Ethnopedagogy, as a discipline, entails analyzing, organizing, and synthesizing the educational practices of specific ethnic groups and their pedagogical customs in education and training. The primary objective of ethnopedagogy is to delineate the ideal individual envisioned by a community through the inheritance of the rich heritage of folk pedagogy. Consequently, ethnopedagogy acts as a conduit linking a nation's historical values with contemporary education.

Ethnopedagogy delves into the entrenched educational culture of communities, emphasizing that educating individuals with strong moral principles, a profound love for their homeland, and a profound sense of ethnic belonging is contingent upon early exposure to ethnocultural education, which begins in infancy and extends into formal schooling. It underscores the importance of acquainting children with the traditions, customs, and national identity of their people, elements that are vividly expressed in folk art.

Ethnopedagogy is a scholarly discipline that explores the relationship between culture and education. It investigates how ethnicity influences learning and education processes, devises methods and strategies that consider students' ethnic characteristics and aims to establish conducive conditions for effective learning and student development while respecting their ethnicity and cultural traits. Ethnopedagogy assists in bridging cultural gaps and fostering a supportive educational environment for all participants by acknowledging the significance of ethnic identity, encompassing language, traditions, customs, values, and other cultural elements shaped during socialization (Figure 1).

Fig 1. Process of implementation of ethnocultural-oriented education.



Source: own elaboration.

By nurturing and preserving students' ethnic identities in alignment with their needs and characteristics, ethnopädagogy contributes to the development of a tolerant attitude towards diverse cultures and ethnic groups. Consequently, ethnopädagogy plays a crucial role in the educational sphere by fostering the cultivation of harmonious and tolerant individuals capable of engaging and collaborating with representatives from various ethnic backgrounds (Tengri, 2023).

Educational programs in social and humanitarian disciplines emphasize instilling students with spiritual and moral values and patriotic sentiments. Throughout historical development, the Kazakh people have strived to safeguard their land, preserve cultural heritage, and attain

independence as a sovereign state. These vital issues have always been on the agenda. The role of educational establishments in the upbringing of a young generation, mainly civic-patriotic education is increasing. Teachers are responsible for raising creative, smart, and talented young people, who are patriots of their Motherland. To achieve these goals, it is important not only to give knowledge and skills that help to form appropriate principles and worldviews but also to develop the necessary personal qualities and spiritual world of children. The vital task is to blend production, education, and science. Therefore, our country is carrying out a crucial reform in the scientific sphere, updating the educational system, and creating a new effective system for training technical and professional specialists.

All contemporary teaching methods are focused on a learner (learner-oriented), and the use of technological aids is quite indispensable, which makes learning more accessible and more enjoyable.

Learners are individuals, they are all different, and they grasp information differently. Teaching with various styles began in the 1900s when various studies showed that students learn at different paces (Babintseva et al., 2023). As a result, they cannot all assimilate the same amount of knowledge simultaneously in the same way. The type of teaching method used by the teacher influences the student's rate of learning and thinking patterns.

For instance, a recent study on high school students shows the significance of collaborative learning (a modern teaching method) on the student's ability to think critically (Prishchepa & Burovkina, 2023). These are the main reasons many educators today are eager to use innovative teaching methods in higher education for their students.

George Couros is a worldwide leader in the area of innovative teaching, learning, and leading, and he has a focus on innovation as a human endeavor. According to Couros & Apsey (2024), the main goal of educators is not just to control those they serve, but to reveal the students' abilities and talents. "If innovation is going to be a priority in education, we need to create a culture where trust is the norm".

He also notes: "Technology will never replace great teachers, but technology in the hands talents is developed so that they lead to the creation of new and better ideas" (Couros, 2017). This is where the book is the most powerful: he is defining innovation as a way of thinking and applying that thinking to create 'better learning opportunities'. He goes further to define 8 characteristics of the innovator's mindset:

**\*Empathetic.** Teachers put themselves in their students' shoes, and think about the classroom environment and learning opportunities from the point of view of the student, not the teacher. You have to think from students' perspectives.

**\*Problem finders/Solvers.** Traditionally, teachers ask students to find answers or solve questions, but in real life, there is often no step-by-step way of finding the answer. George writes "Sometimes it takes several attempts and iterations to solve real-life problems, and, sometimes, there are several correct answers ...

**\*Risk takers.** Teachers know that not everything they try will work with every learner, and he says that risk is important to establish that they are meeting the needs of each unique student. Some solutions will work, while others need a different method or format.

**\*Networked.** He believes that spaces where people actively contribute ideas make the teachers smarter - and social media is the place for ideas to spread.

**\*Observant.** He writes that "sometimes the most effective thing you get from the network isn't an idea, but the inspiration or courage to try something new."

**\*Creators.** Learning is creation not consumption ... knowledge is something a learner creates.

**\*Resilient.** New and different things can be seen as alarming. The reality is that the teachers have a lot of questions because it is something new ... innovators must be ready to move forward, even when the risk of rejection is involved."

**\*Reflective.** Teachers and educators need to be asking themselves what worked and what didn't, what we would change, and what questions we have as we continue to move forward.

Being aware of innovative ways of teaching and their characteristics, the next step is a discussion of the term "teaching methods". Teaching methods constitute all the principles and strategies used in a classroom setting to promote learning. It points out the processes or methodology a teacher applies when imparting knowledge to the students.

Teaching with different styles began in the 1900s when various studies showed that students get knowledge at different paces. As a result, they cannot comprehend the same amount of knowledge simultaneously in the same way. The teaching method used by the teacher impacts not only the students' rate of learning but also on thinking patterns. For instance, recent research on high school students showed the importance of collaborative learning (a modern teaching method) on the students' ability to think critically. Such studies are one of the main reasons many educators today try to use innovative teaching methods in higher education for their students.

An innovative or contemporary teaching approach involves utilizing creative concepts and technological tools to enhance learning. The role of the teacher extends beyond imparting knowledge; it encompasses creating a visual and interactive learning environment. It is crucial to acknowledge that innovative teaching methods prioritize the student, emphasizing the need for effective peer communication skills.

Afrisanti Lusita highlights that proficient educator not only help students achieve national academic standards but also equip them with knowledge and skills essential for lifelong learning. To become respected and innovative teachers, educators must possess a diverse skill set, including communication abilities, foundational competencies in language and mathematics, technological proficiency, problem-solving skills, cultural and linguistic literacy, interpersonal skills, critical and creative thinking skills, and the ability to navigate digital information effectively.

This study aims to identify new educational methodologies and propose updated criteria for their integration, ensuring that the outcomes align with state requirements.

## DEVELOPMENT

Diachronic analysis of the historiography of the problem under investigation allowed us to identify 4 principles in ethnopedagogy. A comprehensive study leads to the implementation of innovative methods of teaching using ethnopedagogy.

Theoretical analysis is used to define the main terms of the research, such as 'innovation', 'flipped method of teaching', 'artificial intelligence', 'collaborative learning'. The empirical method of the online survey was used to define the role of ethnopedagogic studies at higher educational institutions.

Chuvash scientist Volkov, made a great input to the development of ethnopedagogy. He was the first scientist, who used the term "ethnopedagogy" in pedagogical literature. Upbringing and education in a democratic society cannot function effectively; they cannot exist without ethnopedagogy. Volkov (1974), carried out a unique approach concerning upbringing, his thesis is widely used in children's upbringing of different ages and different educational establishments. His approaches are widely spread and are in demand in the pedagogical environment.

In the contemporary system of education, pedagogy is considered to be one of the main productive and prolific sacred forces in the life of nations. Its compulsory study contributes to an expansion, deepening knowledge in the field of national and regional private ethno-pedagogics. It also develops the right attitude to cultural heritage and national and universal values. Having its peculiar features associated with the culture and traditions it led to the formation and development of ethnopedagogy as a science in Kazakhstan. Kazakh ethnopedagogy is a unique



phenomenon formed due to the uniqueness of the ethnic culture of the Kazakhs, revealed in traditions, language, rituals, religion, and a unique ethnic worldview, which is expressed in national self-awareness, attitudes, and feelings.

Ethnopedagogy, as a scientific discipline, encompasses principles such as cultural conformity, nationality, and natural conformity, along with integrative, practice-orientedness, and subjectivity. These principles are essential in guiding the professional activities of teachers. The integrative nature of ethnopedagogy, as highlighted by Volkov (1974), is a defining characteristic of the ethnic component within higher pedagogical education.

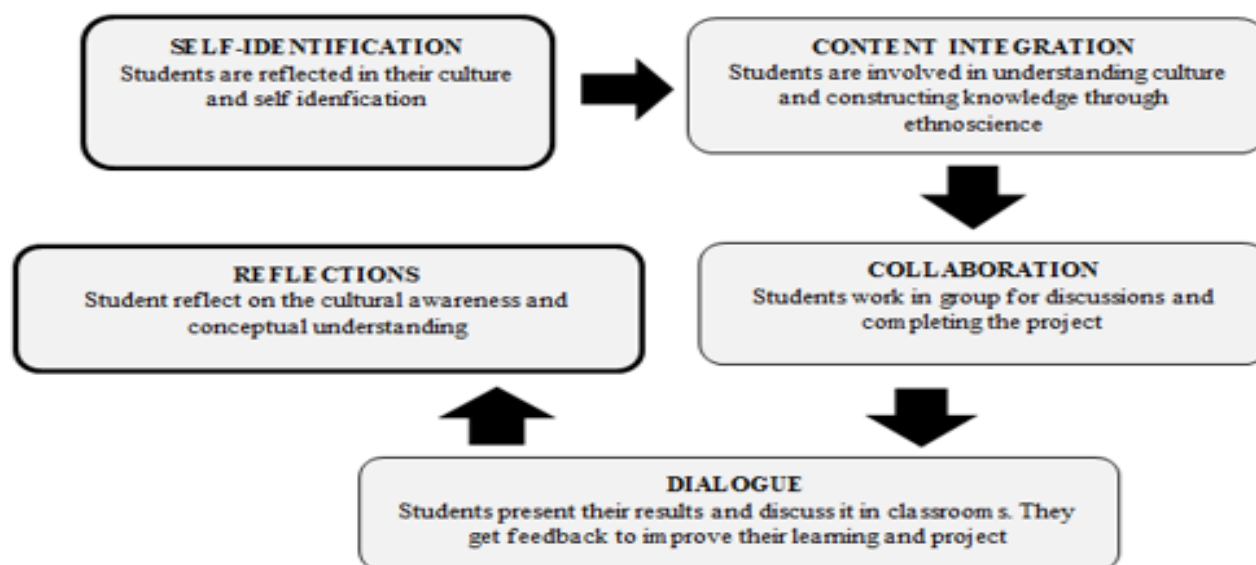
Key aspects of ethnocultural education and the training of the younger generation are elucidated in the works of various scholars. While the principles of ethnopedagogy are crucial, there is a lesser focus on addressing ethnopedagogical issues in multi-level education contexts.

In exploring ethnopedagogy, several fundamental principles emerge:

1. The principle of the cultural-historical approach underscores the significance of considering the culture and history of an ethnic group in education. This principle emphasizes the need for educators to incorporate the cultural and historical characteristics of the ethnic group into the educational environment, fostering pride in ethnicity, self-identification, and mutual respect among diverse ethnic groups.
2. The principle of intercultural interaction emphasizes active engagement and exchange between individuals from different cultures within the educational setting. It promotes mutual comprehension, collaboration, and the development of tolerance, respect, and intercultural communication skills among students of varied ethnic backgrounds.
3. The principle of partnership and cooperation underscores the importance of active interaction among students, teachers, parents, and representatives of diverse ethnic groups and organizations. This principle advocates for collective efforts in education, with educators serving as mentors to facilitate skill development, teamwork, and knowledge exchange among students.
4. The principle of humanization of education focuses on recognizing and respecting each student's uniqueness, promoting their free development and self-expression. By creating conditions that support individual growth while considering their specific needs and characteristics, this principle aims to foster a holistic educational experience.

Through the application of these principles, teachers can effectively implement innovative teaching methods (Figure 2). One such method gaining popularity is the 3D Printing Teaching Method, which offers a stimulating learning approach by allowing students to physically interact with objects and concepts. This technology enhances learning outcomes, skill development, and student engagement, fostering creativity and collaboration while improving public-speaking abilities through the use of 3D-printed objects in presentations and demonstrations.

Fig 2. The integration of ethnopedagogy and science learning stages.



Source: own elaboration.

This method is one of the essential ones, which makes the learning material easy to understand. Students gain knowledge quicker when they have access to the materials they are learning.

### **Flipped Classroom Teaching Method**

One of the most popular innovative teaching methods is the flipped classroom teaching model (Bolina et al., 2022). It consolidates using technology mainly through video lectures, screencasting tools, editing, and educational apps to enable learning among the students. The procedure of the lesson is that the teacher gives the material in the form of a video in advance before starting the lesson (Prishchepa & Burovkina, 2023). The students should look through the material in advance before they attend the lesson. The flipped classroom concept was first introduced by two teachers in Colorado – Jonathan Bergman and Aaron Sams, in 2007. The idea came to them when they discovered that students who skipped classes due to illness or any other reasons had no way to catch up on the topics taught in class. They began to record videos of the lessons and used these videos as materials in the class. This model of teaching eventually became popular evolving into a full-fledged learning technique that has been revolutionizing the world of education. Traditionally, the teaching process is very much one-sided (Bergmann & Sams, 2012). Usually, the educator teaches the class as a whole, gives them notes, makes them do homework, and gives them generalized feedback through tests. There are hardly any opportunities for the students to apply what they have learned to situations or have much involvement from their end. This kind of method is quite different from the traditional one. This method allows 2 stages of learning. The 1st stage includes watching pre-recorded videos of the themes, reading and reviewing course materials, participating in online activities, and finally doing research. The 2nd stage is implemented in the classroom. The students have discussions, make and defend presentations, do various experiments, and also participate in formative assessments.

### **Collaborative Learning**

Collaborative learning is a modern instructional approach where the teacher organizes students into smaller groups to collaborate on tasks, share ideas, engage in debates, and instruct one another. This method fosters group learning, with the teacher assuming a guiding role (Bonkalo et al., 2023). Through collaborative learning, students enhance their teamwork abilities and cultivate skills in listening, brainstorming, communication, interpersonal interactions, and problem-solving. By working together in groups of two or more, students collectively tackle

challenges, accomplish assignments, and grasp new concepts. This approach facilitates the processing and integration of information and ideas, moving away from rote memorization. The benefits of collaborative learning include transforming learning into an active process, promoting critical and quick thinking, honing public speaking and active listening skills, and enhancing cooperation among students (Paniagua & Istance, 2018).

### **Project-based learning**

This approach represents a student-centered educational strategy characterized by a dynamic and effective classroom methodology (Shishov et al., 2022). It is based on the premise that students acquire comprehensive knowledge by actively engaging with real-world challenges and issues. This method equips learners with a range of skills and knowledge while involving them in projects to foster creativity and self-awareness. In this method, the teacher introduces a problem, and the learners are tasked with seeking the requisite skills and information to resolve the issue.

### **Gamification**

Utilizing games as a teaching tool is a prevalent and contemporary educational approach (Shishov et al., 2022). In this method, educators design a series of quests or objectives for students to accomplish by selecting the optimal course of action. As students' progress through successful completion stages, they earn reward points akin to video games. Establishing a game-based learning environment can be enriching, and platforms like Classcraft enable teachers to transform their classrooms into gamified settings. Through this instructional method, students can enhance their practical, problem-solving, and decision-making skills.

The integration of gamification in education is on the rise due to its engaging and motivating nature, fostering student involvement during lessons. Modern video game features captivate not only children but also adults. Gamification in learning incorporates game-based elements such as point scoring, peer competition, and teamwork, facilitating the acquisition of new knowledge and the assessment of students' understanding. Regardless of age, learners exhibit a fondness for educational experiences infused with game-based elements (Paniagua & Istance, 2018).

### **Artificial Intelligence in education**

Artificial intelligence is a booming technological domain capable of changing various aspects of the education system. The role of artificial intelligence in education can be seen in boosting efficiency, productivity, and

convenience, supplying the sector with a range of different benefits. A significant portion of working time is spent on administrative and grading tasks. Artificial intelligence is changing the world of education. Artificial intelligence has many advantages in the education field, one of which is immersive learning. It allows taking more control over their learning processes and contributes them to real-life experiences, which can be applied in daily life outside of school hours. The next advantage is Intelligent Tutoring Systems (ITS). It gives students feedback about their work and mentors them toward the right answer, and it has proved to be more effective than traditional teaching methods alone.

The most famous benefit is the ability to contribute helpful feedback on a learner's academic performance such as tests and homework assignments, which can be received by an intelligent agent.

Artificial intelligence is getting more effective, and one of these applications includes intelligent tutoring systems, which help students learn, practice, and master new skills by supplying individualized instruction based on their proficiency levels.

Ethnopedagogical approaches to teaching presuppose an understanding of the fundamentals of traditional education. Teaching involves stimulating learning activities through exploration and acquired knowledge, while pedagogy encompasses the systematic process of teaching as an academic discipline.

Pedagogy encompasses the principles and methodologies of teaching, encompassing the techniques and strategies employed by educators to facilitate learning. It primarily focuses on effective teaching methods, addressing how students learn and the most effective ways to structure learning experiences to promote purposeful and enduring learning outcomes. Effective pedagogy emphasizes student-centered learning, encourages active participation and engagement, utilizes diverse teaching techniques and resources, and fosters critical thinking and problem-solving skills. As a result, successful pedagogical approaches cater to the diverse needs and backgrounds of all learners.

The establishment and advancement of ethnopedagogy as a discipline in Kazakhstan possess distinct characteristics linked to the region's culture and traditions. Ethnopedagogical education in Kazakhstan aims to equip future educators with the skills to revitalize, reinforce, and uphold the progressive pedagogical traditions and knowledge acquired through their professional endeavors. Student socialization and interaction are rooted in mutual understanding and respect. This educational approach

enables students to cultivate teamwork skills and enhance their abilities in listening, brainstorming, communication, interpersonal relations, and problem-solving.

## CONCLUSIONS

The research's practical significance lies in its exploration of methods and strategies for integrating ethnopedagogical principles with innovative approaches in higher education. An examination of pedagogy's historical context reveals that neglecting regional and national characteristics when shaping students' social and moral perspectives can have adverse effects on creativity, cultural traditions, the nation's historical heritage, indigenous culture, and the cultivation of patriotism and respect for the homeland. This study is grounded in the principles of a cultural-historical approach, intercultural interaction, preservation and advancement of ethnic identity, consideration of ethnic attributes, collaboration and partnership, and the humanization of education. It aims to establish a supportive educational environment where every student can realize their potential and succeed.

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