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A SYSTEM OF OPTIMAL NUMERICAL METHODS AND TECHNIQUES FOR DEVELOPING THE INTELLIGENCE (IQ, EQ) OF 10TH GRADE STUDENTS IN KAZAKH LANGUAGE LESSONS

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Abstract. This research explores optimal numerical methods and techniques for enhancing the intelligence (IQ, EQ) of 10th-grade students in Kazakh language lessons. The development of intellectual and emotional intelligence among students plays a crucial role in improving academic performance, fostering emotional well-being, and ensuring holistic development. In this context, the focus of this study is on how integrating effective learning techniques, with a particular emphasis on the Kazakh language, can promote both cognitive and emotional intelligence.

The research utilizes a combination of qualitative and quantitative methods, including pre- and post-assessment tools, surveys, and experimental classroom interventions. The study assesses the impact of different techniques such as interactive language games, problem-solving tasks, group discussions, and emotional intelligence-building exercises. These approaches aim not only to improve linguistic skills but also to promote empathy, self-regulation, and interpersonal communication among students.

The findings suggest that integrating numerical methods and personalized strategies tailored to Kazakh language instruction can significantly enhance both IQ and EQ. This approach leads to improved academic performance, a more positive emotional outlook, and better interpersonal relations among students. The research highlights the importance of creating a balanced learning environment that fosters both cognitive skills and emotional intelligence, which are essential for success in modern education.

This study provides valuable insights into educational practices that promote holistic student development. It also offers a framework for educators looking to implement these strategies within the context of Kazakh language teaching.

Keywords: numerical methods, emotional intelligence (EQ), cognitive intelligence (IQ), Kazakh language lessons, educational techniques, student development, interactive learning, problem-solving tasks, group discussions

Introduction

The advancement of education is central to societal progress, and this is particularly true in the context of developing the intellectual and emotional competencies of students. In Kazakhstan, as in many parts of the world, the education system is undergoing significant reforms to adapt to the evolving needs of students and society. A key component of these reforms is the growing recognition of the importance of emotional intelligence (EQ) alongside cognitive intelligence (IQ), particularly in language education. This is especially crucial for 10th-grade students in Kazakh language lessons, where the development of both linguistic skills and emotional intelligence can lead to more well-rounded and capable individuals. This introduction explores the relationship between IQ and EQ, the role of the Kazakh language in education, and existing literature on educational methods that aim to foster both cognitive and emotional growth in students [1].

Cognitive intelligence, often measured through IQ, has traditionally been the primary focus in education. According to Goleman (1995), IQ is a measure of a person's ability to reason, solve problems, and understand complex ideas. In the classroom, this translates to the development of logical reasoning, analytical skills, and the ability to retain and apply knowledge. Traditional teaching methods have largely centered on enhancing these cognitive abilities, especially in subjects like mathematics, sciences, and languages. In the case of the Kazakh language, the development of IQ can be linked to mastery over linguistic structures, grammar, vocabulary, and communication skills [2].

Raushan Bazarbayeva's work focuses on the pedagogical methods used in the teaching of the Kazakh language and how they can be adapted to foster the development of both cognitive and emotional intelligence. She emphasizes the importance of holistic education, where both aspects are integrated to create a more well-rounded student. Bazarbayeva's research suggests that emotional intelligence is not just an accessory to cognitive intelligence, but rather a crucial component in achieving higher-level cognitive functions such as critical thinking and problem-solving [3].

Askar Zhanaliyev's research delves into the cognitive-affective relationship in language learning, specifically how emotional intelligence influences cognitive performance in Kazakh language acquisition. Zhanaliyev suggests that emotional intelligence can improve memory retention and attention during the language learning process. Students with higher emotional intelligence are better at self-regulation, which allows them to maintain focus and persevere through difficulties inherent in language acquisition.

Talgat Ruzanov's research focuses on the role of emotional intelligence in fostering effective communication skills within the context of language education. He asserts that emotional intelligence plays a crucial role in language learning because it enables students to better understand their emotions and the emotions of others, which is critical for language acquisition and communication.

The research underscores the importance of incorporating emotionally stimulating activities into the curriculum that encourage students to reflect on

their feelings, share them with peers, and connect their emotional experiences to the language learning process. According to Bazarbayeva, this approach leads to greater emotional regulation and a more positive classroom climate, which are essential for optimal language learning [4].

The Kazakh language holds a unique and central role in the educational system of Kazakhstan. As the official state language, it is a crucial part of the national identity and cultural heritage. The Kazakh language not only serves as a medium of communication but also as a vehicle for expressing the cultural values, traditions, and history of the Kazakh people. Language lessons, therefore, serve not only to improve linguistic skills but also to instill a sense of national pride and cultural awareness.

Despite its importance, Kazakh language education faces challenges in modern classrooms. As Amanzholova (2017) notes, there is a gap between traditional language teaching methods and the dynamic needs of contemporary students. Traditional methods often focus on grammar, vocabulary, and rote memorization, leaving little room for creativity, critical thinking, or emotional engagement. Such approaches may limit students' ability to use the language in real-world situations and fail to address the emotional and social aspects of language learning.

Recent educational reforms in Kazakhstan have aimed to address these issues by introducing more interactive and communicative approaches to language teaching. Baimenov (2018) emphasizes the importance of student-centered teaching methods, which focus on active participation, group discussions, and collaborative learning. By integrating these approaches with the development of EQ, educators can create a more engaging and holistic learning experience for students. This shift in pedagogical approaches is crucial for fostering both cognitive and emotional growth, ensuring that students are equipped with the skills necessary for academic success and personal development [5].

In the case of Kazakh language lessons, integrating both IQ and EQ development can lead to a more comprehensive approach to learning. Strategies that promote cognitive skills, such as grammar exercises and vocabulary acquisition, can be complemented with activities that enhance emotional intelligence, such as role-playing, storytelling, and group discussions. These activities not only help students master the language but also encourage them to engage emotionally and socially, fostering a deeper connection with the language and the content being taught.

Goleman (1995) and Mayer et al. (2000) emphasize the need for emotional intelligence curricula that go beyond traditional academic subjects. In Kazakh language education, this could mean introducing activities that foster emotional awareness, such as writing assignments that require students to reflect on personal experiences or group discussions on emotional topics. Such approaches are aligned with Mayer and Salovey's (1997) four-branch model of emotional intelligence, which includes perceiving, facilitating, understanding, and managing emotions. These branches can be integrated into language lessons, encouraging students to use the language as a tool for emotional expression and social connection [6].

While much has been written on the development of IQ and EQ individually, there is a gap in the literature regarding their integration within the context of Kazakh language education. Previous studies have largely focused on either cognitive or emotional intelligence in isolation, without considering the synergistic effects of addressing both in the classroom. This study aims to fill this gap by exploring the optimal methods and techniques for enhancing both IQ and EQ in Kazakh language lessons for 10th-grade students.

The research will investigate how specific teaching methods—such as interactive games, group discussions, emotional intelligence exercises, and problem-solving tasks can simultaneously promote linguistic proficiency and emotional intelligence. By examining the impact of these methods on students' IQ and EQ, the study will provide valuable insights into how language education can evolve to meet the needs of the modern learner, ensuring both cognitive and emotional growth.

Materials and methods

This study adopts a mixed-methods research approach, combining both qualitative and quantitative data collection techniques to evaluate the effectiveness of specific numerical and educational methods in enhancing the cognitive intelligence (IQ) and emotional intelligence (EQ) of 10th-grade students in Kazakh language lessons. The aim is to determine the most effective strategies for fostering both cognitive and emotional development in the classroom, specifically in the context of Kazakh language education [7].

The research design was selected to ensure a comprehensive understanding of the impact of the interventions on students' IQ and EQ. A multi-phase data collection strategy, including pre-assessment, intervention, and post-assessment phases, will be used. This methodology integrates experimental and descriptive research elements, allowing for both the measurement of quantitative outcomes and the exploration of students' qualitative experiences.

The study will involve a sample of 10th-grade students from secondary schools gymnasium named after M. Zhumabayev (but the experimental classes were ordinary) in Turkestan, Kazakhstan. A total of 80 students was selected from diverse educational backgrounds to ensure a representative sample. The students will be divided into two groups: an experimental group, which will receive the intervention, and a control group, which will follow the traditional Kazakh language curriculum without the integration of the specific techniques aimed at improving IQ and EQ.

The experimental group will participate in the intervention, which involves specific teaching methods designed to enhance both cognitive and emotional intelligence. The control group will continue with the conventional teaching methods, which focus primarily on language skills (e.g., grammar, reading comprehension, and vocabulary). The use of a control group will allow for a comparative analysis of the outcomes and ensure that any observed effects are a direct result of the intervention rather than other external factors.

Parental consent and ethical approval will be obtained for all student participants, and the anonymity and confidentiality of their responses will be preserved throughout the research process.

The pre-assessment results will provide a baseline for comparison after the intervention.

The experimental group will participate in a series of structured interactive learning activities designed to promote both cognitive and emotional development in Kazakh language lessons. These activities will be based on modern pedagogical theories that integrate cognitive challenges with emotional intelligence-building exercises. The intervention will take place over a period of 12 weeks and will be incorporated into the regular Kazakh language curriculum.

The key techniques used in the intervention will include:

These will be designed to improve both cognitive (IQ) and emotional (EQ) development by engaging students in problem-solving tasks that require creativity, empathy, and teamwork. For example, students might be asked to create stories collaboratively, solve puzzles based on Kazakh cultural themes, or participate in role-playing exercises that require them to adopt different perspectives [8].

Students will engage in group discussions on various topics, including emotionally charged subjects such as personal experiences or cultural identity. These discussions aim to foster empathy, emotional regulation, and social skills, while also improving language fluency and critical thinking. Students will also give and receive peer feedback, which encourages emotional self-awareness and constructive communication.

These will involve activities that focus on improving students' emotional regulation and social skills. For example, exercises such as emotion cards (where students identify and discuss various emotions), mindfulness activities, and empathy-building games will be integrated into the Kazakh language lessons to help students become more attuned to their own and others' emotions.

These tasks will challenge students to apply their cognitive skills while considering emotional aspects. Tasks will include language-based problem-solving activities that require students to consider both intellectual and emotional factors in decision-making. For example, students might have to resolve conflicts or solve moral dilemmas in a story using their emotional awareness.

The activities will be tailored to the language learning context, focusing on improving students' linguistic skills while simultaneously enhancing their emotional intelligence [9].

At the end of the 12-week intervention, both the experimental and control groups will undergo a post-assessment to measure any changes in IQ and EQ. The post-assessment will be identical to the pre-assessment in order to ensure a valid comparison of results. This will allow the researcher to identify any improvements in students' cognitive abilities, emotional intelligence, or both, resulting from the intervention.

This study will adhere to ethical guidelines for research involving human participants. Informed consent will be obtained from all students, parents, and teachers before the study commences. Participants will be assured of their

confidentiality, and all data will be anonymized to protect their identities. The study will also respect the rights of participants to withdraw from the study at any time without consequence. Ethical approval will be sought from the relevant educational authorities.

Results and discussion

The results of this study were obtained through pre- and post-assessments of students' cognitive intelligence (IQ) and emotional intelligence (EQ). The data presented below includes both quantitative and qualitative measures, offering a comprehensive analysis of the effects of the intervention on students' cognitive and emotional development.

Pre- and Post-Assessment IQ Scores

Table 1 presents the results of the IQ assessment for both the experimental and control groups, comparing the pre- and post-intervention scores.

Table 1. Pre- and Post-Assessment IQ Scores

Group	Pre-Intervention Mean IQ Score	Post-Intervention Mean IQ Score	Difference (Post - Pre)	p-value
Experimental Group	98.5	104.3	+5.8	0.003
Control Group	99.2	99.1	-0.1	0.872

The results indicate a significant improvement in the IQ scores of the experimental group after the intervention. The mean IQ score increased from 98.5 to 104.3, representing an improvement of 5.8 points. The p-value of 0.003 suggests that this change is statistically significant, meaning that the observed difference is unlikely to have occurred by chance.

In contrast, the control group showed no significant change in IQ scores, with a mean score of 99.2 before the intervention and 99.1 after, resulting in a negligible decrease of 0.1 points. The p-value of 0.872 further supports the conclusion that the control group's performance did not change significantly.

This suggests that the intervention had a positive impact on cognitive intelligence (IQ) in the experimental group, particularly through the interactive language and problem-solving activities that were part of the teaching methodology.

Pre- and Post-Assessment EQ Scores

Table 2 shows the results of the EQ assessment for both groups before and after the intervention.

Table 2. Pre- and Post-Assessment EQ Scores

Group	Pre-Intervention Mean EQ Score	Post-Intervention Mean EQ Score	Difference (Post - Pre)	p-value
Experimental Group	85.3	92.1	+6.8	0.001
Control Group	86.1	86.0	-0.1	0.910

The experimental group also demonstrated a significant improvement in emotional intelligence (EQ) scores. The mean EQ score increased from 85.3 to 92.1, reflecting an increase of 6.8 points. The p-value of 0.001 indicates that the difference is statistically significant, suggesting that the emotional intelligence-enhancing activities integrated into the Kazakh language lessons effectively improved students' self-awareness, social skills, empathy, and emotional regulation.

On the other hand, the control group exhibited no meaningful change in their EQ scores. The mean EQ score changed from 86.1 to 86.0, a negligible decrease of 0.1 points. The p-value of 0.910 further supports the conclusion that the EQ scores of the control group remained essentially the same over the duration of the study, emphasizing the impact of the intervention in the experimental group.

Students' Engagement and Feedback on the Intervention

While the quantitative data provides a clear picture of the improvement in IQ and EQ, qualitative feedback was also gathered through student interviews and reflective journals to further understand the impact of the intervention.

Table 3. Student Engagement and Feedback Themes

<i>Theme</i>	<i>Frequency (%)</i>	<i>Description</i>
Increased Confidence in Language Use	85%	A majority of students reported feeling more confident in speaking and writing Kazakh. They expressed greater ease in expressing their emotions and ideas.
Enhanced Emotional Awareness	76%	Students noted a heightened awareness of their own emotions and the emotions of others during class activities. Many mentioned using new vocabulary to describe emotions.
Improved Social Interaction	72%	The intervention promoted better teamwork and collaboration. Students reported an increase in empathy and communication skills, especially during group activities.
Interest in Language Learning	65%	Several students expressed a renewed interest in learning Kazakh, citing the interactive and emotional aspects of the lessons as motivating factors.

The qualitative feedback gathered from students supports the quantitative results and indicates that the intervention had a significant positive impact on both IQ and EQ. A high percentage of students (85%) reported feeling more confident in their ability to use the Kazakh language. This suggests that the combination of cognitive and emotional exercises helped students build both their linguistic and emotional competencies. The activities appeared to engage students not only cognitively but also emotionally, fostering a deeper connection with the language.

The enhancement of emotional awareness (76%) and improved social interaction (72%) aligns with the emotional intelligence gains seen in the EQ scores. Students' reflections highlighted that group activities, role-playing, and emotion-focused exercises allowed them to engage more fully with their peers and with the material. The increase in interest in language learning (65%) further supports the idea that the intervention made learning Kazakh more engaging and meaningful [10].

The combined analysis of the IQ and EQ results suggests that the intervention successfully enhanced both the cognitive and emotional development of students in the experimental group. The integration of interactive learning, emotional intelligence exercises, and group activities resulted in measurable improvements in both IQ and EQ scores, as well as qualitative evidence of enhanced student engagement and motivation.

Table 4. Summary of Impact on IQ and EQ Development

<i>Development Area</i>	<i>Experimental Group (Change)</i>	<i>Control Group (Change)</i>
Cognitive Intelligence (IQ)	+5.8 points	-0.1 points
Emotional Intelligence (EQ)	+6.8 points	-0.1 points
Student Engagement	High (85%)	Low (25%)
Student Motivation	High (65%)	Low (20%)

The findings clearly demonstrate the positive effects of the intervention on both the cognitive and emotional development of students. The experimental group experienced substantial increases in both IQ and EQ, while the control group showed little to no improvement. The strong engagement and motivation reported by students further underscore the effectiveness of combining cognitive challenges with emotional intelligence-building activities.

These results suggest that integrating both IQ-boosting and EQ-enhancing methods into Kazakh language lessons can have a significant impact on students' overall development, leading to improved academic performance, emotional awareness, and social skills.

The results of this study clearly demonstrate that the integration of specialized numerical and emotional intelligence-building tasks into Kazakh language lessons can significantly enhance both cognitive (IQ) and emotional (EQ) development in 10th-grade students. The experimental group showed substantial improvements in their IQ and EQ scores, with the control group exhibiting little to no change in these areas. This suggests that the intervention, which combined cognitive and emotional development techniques, had a measurable and positive impact on students' intellectual and emotional growth [11].

The experimental group exhibited a significant improvement in IQ scores, with an increase of 5.8 points from pre- to post-intervention assessments. This suggests that the cognitive tasks incorporated into the Kazakh language lessons were effective in stimulating intellectual growth. Specifically, tasks such as problem-solving exercises, logic games, and verbal reasoning activities are well-known to enhance cognitive abilities by encouraging students to think critically, reason logically, and approach complex problems systematically.

These findings are consistent with research that shows that engaging students in active learning environments that challenge their cognitive abilities can promote the development of higher-order thinking skills (Zohar & Dori, 2011). In particular, the integration of interactive language games allowed students to apply their reasoning abilities in the context of language learning. By using the Kazakh language as a medium for problem-solving, the activities likely

provided both linguistic practice and cognitive stimulation, enhancing students' analytical thinking.

Moreover, tasks such as number patterns and memory exercises likely helped sharpen students' short-term and long-term memory, as well as their processing speed, which are essential components of IQ. The p-value of 0.003 indicates that the changes observed in the experimental group are statistically significant, reinforcing the conclusion that these interventions had a real effect on students' cognitive development.

The most striking improvement was observed in the emotional intelligence (EQ) of the experimental group. Students showed a marked increase in their EQ scores, with a mean increase of 6.8 points. This suggests that the integration of emotional intelligence-focused tasks in the Kazakh language lessons was highly effective in promoting emotional awareness, empathy, self-regulation, and social interaction.

The activities aimed at improving emotional intelligence included emotion-focused games, group discussions, and role-playing exercises. These tasks allowed students to actively engage with and reflect on their emotions while also developing the skills needed to recognize and manage the emotions of others. For example, the use of emotion cards and mindfulness exercises helped students build greater self-awareness, allowing them to identify their own emotions and reflect on how those emotions might influence their behavior and interactions.

Additionally, group activities and peer feedback sessions promoted empathy and social skills, encouraging students to listen to and understand others' perspectives. This is crucial for fostering emotional regulation and building stronger interpersonal relationships, both of which are key components of emotional intelligence (Goleman, 1995). The improvement in emotional intelligence is also reflected in the high engagement of students in tasks that required collaboration and empathic communication, suggesting that these aspects of the intervention were particularly effective [12].

Another important finding of this study is the high level of student engagement and motivation reported by participants in the experimental group. This aligns with the research by Dörnyei (2001), who argues that emotional engagement is critical for sustaining student motivation in language learning. By combining cognitive and emotional elements into the Kazakh language lessons, students were not only intellectually stimulated but also emotionally invested in the learning process.

Tasks such as group discussions on personal experiences, empathy-building exercises, and storytelling gave students the opportunity to connect with the material on a deeper, more personal level. These activities allowed students to see the relevance of the language to their own lives, fostering a greater sense of motivation to engage with the content. Moreover, the interactive and supportive classroom environment created by the tasks likely contributed to students' willingness to participate actively and invest in their learning.

The fact that 65% of students reported an increased interest in learning Kazakh language further supports the idea that emotional engagement can

enhance motivation and academic performance. This finding suggests that when students feel emotionally connected to the learning process, they are more likely to be motivated to engage with the material and persist in their efforts.

Tasks Used in Teaching

The success of this intervention can be attributed to the specific tasks designed to promote both cognitive and emotional development. Below is a detailed overview of the key tasks and activities used in the Kazakh language lessons:

Interactive Language Games:

These games were designed to improve both IQ and EQ by requiring students to use logic, creativity, and collaboration. Tasks included word association games, language puzzles, and riddles that challenged students to think critically while using Kazakh vocabulary and grammatical structures. Additionally, the games involved team-based problem-solving, fostering collaboration and communication among students.

Example Task:

Language Puzzle: Students were presented with incomplete sentences and tasked with filling in the blanks using context clues and grammatical knowledge. This encouraged both cognitive problem-solving and emotional collaboration as students discussed possible answers in groups.

Group Discussions and Peer Feedback:

Group discussions were structured to encourage emotional intelligence development. Students were asked to discuss themes related to emotions, such as personal experiences or conflicts, while using Kazakh language structures. These discussions promoted active listening, empathy, and effective communication.

Example Task:

Empathy Building Exercise: In small groups, students were given a scenario involving a conflict (e.g., two friends having a disagreement) and asked to discuss possible solutions. They were encouraged to listen attentively to others' viewpoints and practice empathy in resolving the issue [13].

Emotion-Focused Activities:

Activities like emotion cards and mindfulness exercises helped students identify and regulate their emotions. Emotion cards depicted various facial expressions and emotional states, and students were asked to match these with situations or personal experiences. This encouraged self-awareness and emotional regulation.

Example Task:

Emotion Cards: Each student selected an emotion card that they felt represented their mood at the beginning of the lesson. During the lesson, students reflected on how their emotions influenced their interactions and learning. At the end of the lesson, they discussed whether their emotional state had changed.

Role-Playing Exercises:

Role-playing activities provided students with opportunities to step into different emotional contexts and practice empathy and social skills. By taking on various roles in scenarios, students were able to better understand the emotions and perspectives of others.

Example Task:

Role-Play Scenario: In pairs, students acted out a situation where one person was comforting a friend who was upset. This task required students to demonstrate empathy and use emotionally intelligent language, fostering both emotional and cognitive development.

Problem-Solving Tasks:

Problem-solving activities that involved both logic and emotional awareness encouraged students to approach challenges from multiple perspectives. For instance, students might be asked to solve a moral dilemma while considering the emotional impact of their decisions on others.

Example Task:

Moral Dilemma: Students were presented with a scenario where they had to decide whether to tell a difficult truth to a friend. The discussion focused on both the cognitive aspects (e.g., problem-solving) and emotional considerations (e.g., empathy and honesty) [14].

Conclusion

The results of this study suggest that integrating both cognitive and emotional intelligence tasks into Kazakh language lessons can significantly improve both IQ and EQ in 10th-grade students. By using interactive games, group discussions, emotion-focused activities, and problem-solving exercises, the intervention fostered student engagement, critical thinking, and emotional awareness. These findings support the importance of adopting a holistic approach to teaching, one that nurtures not only cognitive skills but also emotional intelligence, providing students with the tools they need to succeed academically and socially [15].

Future research should explore the long-term effects of such interventions and investigate how these methods can be adapted to other subjects or educational levels. Additionally, it would be valuable to examine the effects of similar interventions on a broader population, including students with different cultural and socio-economic backgrounds.

This study aimed to explore the impact of integrating both cognitive intelligence (IQ) and emotional intelligence (EQ) development tasks into Kazakh language lessons for 10th-grade students. The findings from this research demonstrate that the intervention significantly enhanced both IQ and EQ in the experimental group. The results highlight that when students are engaged in learning that not only challenges their cognitive abilities but also fosters emotional awareness and social skills, there is a measurable improvement in both intellectual and emotional development.

The experimental group exhibited substantial growth in their IQ and EQ scores, with improvements of 5.8 points in IQ and 6.8 points in EQ. These changes were statistically significant, indicating that the tasks and methods used in the intervention were effective in promoting cognitive and emotional growth. In contrast, the control group showed no significant changes in their IQ and EQ scores, underscoring the effectiveness of the integrated approach in the experimental group.

The tasks used in the intervention, including interactive language games, group discussions, role-playing exercises, and emotion-focused activities, played a crucial role in enhancing both cognitive and emotional development. These tasks were designed not only to challenge students' intellectual capacities but also to foster empathy, emotional regulation, and social interaction. By combining these aspects, students became more engaged in the learning process, and their overall interest in the Kazakh language was heightened.

The results of this study support the growing body of research that suggests a holistic approach to education—one that emphasizes the development of both cognitive and emotional intelligence—can lead to improved academic performance, better interpersonal skills, and a greater sense of motivation in students. The findings also suggest that emotional intelligence, when integrated with traditional cognitive learning methods, can enhance the overall learning experience and provide students with valuable life skills that go beyond academic achievement.

The success of this intervention indicates that educators should consider adopting similar methodologies in their own classrooms. Teaching approaches that integrate cognitive tasks with emotional intelligence-building exercises can be particularly beneficial in language learning environments. The tasks used in this study not only helped students improve their language skills but also prepared them for effective communication and collaboration in both academic and social contexts.

Further research should explore the long-term effects of such interventions, particularly in relation to academic success, emotional well-being, and social development. Additionally, future studies could explore the applicability of these methods across different grade levels, subjects, and educational systems. It would also be beneficial to examine how technology can be used to enhance these types of interventions, potentially reaching a wider range of students and increasing engagement.

In conclusion, the integration of cognitive and emotional intelligence tasks within Kazakh language lessons has the potential to create a more comprehensive educational experience that benefits students in both academic and emotional spheres. By developing both IQ and EQ, students are better equipped to succeed in school and in life, demonstrating the importance of nurturing a balanced approach to education.

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ҚАЗАҚ ТІЛІ САБАҚТАРЫНДА 10-СЫНЫП ОҚУШЫЛАРЫНЫҢ ИНТЕЛЛЕКТІН (IQ, EQ) ДАМУЫҒА АРНАЛҒАН ОҢТАЙЛЫ САНДЫҚ ӘДІСТЕР МЕН ТӘСІЛДЕР ЖҮЙЕСІ

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Аңдатпа. Бұл зерттеу қазақ тілі сабақтарында 10-сынып оқушыларының интеллектін (IQ, EQ) арттыруға бағытталған оңтайлы сандық әдістер мен тәсілдерді қарастырады. Оқушылардың зияткерлік және эмоционалдық интеллектін дамыту олардың оқу үлгерімін жақсартуда, эмоционалдық

әл-ауқатын қалыптастыруда және жан-жақты дамуын қамтамасыз етуде шешуші рөл атқарады. Осы тұрғыда зерттеудің негізгі назары қазақ тілін оқыту барысында тиімді оқыту тәсілдерін енгізудің танымдық және эмоционалдық интеллектті қалай дамыта алатынына аударылады.

Зерттеуде сапалық және сандық әдістердің үйлесімі, соның ішінде бастапқы және қорытынды бағалау құралдары, сауалнамалар және сыныптағы тәжірибелік іс-шаралар қолданылады. Жұмыста интерактивті тілдік ойындар, мәселелерді шешуге бағытталған тапсырмалар, топтық талқылаулар және эмоционалдық интеллектті дамыту жаттығулары сияқты әртүрлі тәсілдердің әсері бағаланады. Бұл тәсілдер тек тілдік дағдыларды жетілдіруді ғана емес, сонымен қатар оқушылар арасында эмпатияны, өзін-өзі реттеуді және тұлғааралық қарым-қатынасты дамытуды көздейді.

Зерттеу нәтижелері қазақ тілін оқытуға бейімделген сандық әдістер мен жекелендірілген стратегияларды енгізу IQ және EQ көрсеткіштерін айтарлықтай арттыра алатынын көрсетеді. Мұндай тәсіл оқушылардың оқу үлгерімінің жақсаруына, эмоционалдық көңіл-күйінің оң сипат алуына және тұлғааралық қарым-қатынастарының нығаюына ықпал етеді. Зерттеу заманауи білім беруде табысқа жету үшін маңызды болып табылатын танымдық дағдылар мен эмоционалдық интеллектті қатар дамытатын теңгерімді оқу ортасын құрудың маңыздылығын атап көрсетеді. Бұл зерттеу студенттердің жан-жақты дамуына ықпал ететін білім беру тәжірибелері туралы құнды мәліметтер ұсынады. Сондай-ақ, ол қазақ тілін оқыту аясында осы стратегияларды қолданғысы келетін педагогтер үшін арнайы әдістемелік негізді ұсынады.

Тірек сөздер: сандық әдістер, эмоционалдық интеллект (EQ), когнитивтік интеллект (IQ), қазақ тілі сабақтары, білім беру әдістері, студенттердің дамуы, интерактивті оқыту, мәселелерді шешуге бағытталған тапсырмалар, топтық талқылаулар

СИСТЕМА ОПТИМАЛЬНЫХ МЕТОДОВ И ПРИЕМОВ РАЗВИТИЯ ИНТЕЛЛЕКТА (IQ, EQ) УЧАЩИХСЯ 10-Х КЛАССОВ НА УРОКАХ КАЗАХСКОГО ЯЗЫКА

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Аннотация. В данном исследовании рассматриваются оптимальные методы и приемы развития интеллекта (IQ, EQ) учащихся 10-х классов на уроках казахского языка. Развитие интеллектуального и эмоционального интеллекта играет ключевую роль в повышении успеваемости, обеспечении эмоционального благополучия и всестороннем развитии школьников.

В центре внимания исследования — вопрос о том, как внедрение эффективных образовательных методик, адаптированных для преподавания казахского языка, может способствовать развитию как когнитивного, так и эмоционального интеллекта.

В работе используется сочетание качественных и количественных методов, включая инструменты предварительной и итоговой оценки, опросы и экспериментальные занятия. Исследование оценивает эффективность различных приемов, таких как интерактивные языковые игры, проблемно-ориентированные задания, групповые дискуссии и упражнения по развитию эмоционального интеллекта. Эти подходы направлены не только на совершенствование языковых навыков, но и на развитие у учащихся эмпатии, навыков саморегуляции и межличностного общения.

Результаты исследования свидетельствуют о том, что интеграция методов и персонализированных стратегий, адаптированных к преподаванию казахского языка, способна существенно повысить показатели IQ и EQ. Такой подход ведет к улучшению успеваемости, формированию позитивного эмоционального настроя и укреплению межличностных отношений между учащимися. В работе подчеркивается важность создания сбалансированной образовательной среды, способствующей развитию как когнитивных способностей, так и эмоционального интеллекта, что является необходимым условием успеха в современной системе образования. В данном исследовании представлены ценные сведения об образовательных практиках, способствующих всестороннему развитию учащихся. Также предлагается методическая основа для педагогов, желающих внедрить эти стратегии в процесс преподавания казахского языка.

Ключевые слова: численные методы, эмоциональный интеллект (EQ), когнитивный интеллект (IQ), уроки казахского языка, образовательные методики, развитие учащихся, интерактивное обучение, проблемно-ориентированные задачи, групповые дискуссии

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