

Formation of Social Intelligence of School Children Through the Integration of Subject Knowledge

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Abstract

Social intelligence is essential for school children's development; it enables them to build meaningful relationships and explore complex social interactions. Therefore, the present study aims to determine the impact of integrating subject knowledge in the development of social intelligence among school children, looking at the growing importance of social competencies such as empathy, social skills, and conflict resolution. The study employed a quasi-experimental design involving 60 participants. The participants were divided equally into two groups: experimental and control groups. The experimental group received treatment on integrated subject knowledge, while the control group received instruction through conventional teaching instruction. This study has found generally significant gains in the experimental group, especially in areas such as conflict resolution and social skills, with minimal improvement observed in the control group. These findings suggest that subject integration not only enhances academic engagement but also strengthens interpersonal capabilities essential for collaborative learning and social adaptation. The evidence from this experimental study underscores several critical implications for educational practice in Kazakhstan. First and foremost, the observed improvement in students' social intelligence highlights that integrating subject knowledge into instruction is not merely a curricular innovation but a practical necessity for holistic student development. The study recommends that policymakers and decision-makers in Kazakhstan should promote the systematic inclusion of integrated curricula in both primary and secondary schools, emphasizing activities that combine subject learning with social interaction, such as group problem-solving and interdisciplinary projects.

Keywords: conflict resolution, children, empathy, social Intelligence, subject knowledge

1. Introduction

Social intelligence is an essential component in the development of school children and plays a key role in educational development, navigating complex social interactions, and building meaningful relationships. Social intelligence has become central to understanding oneself and knowing others in the new education trend. The capacity to know objects or sounds is also an essential component of social intelligence that deserves to be investigated among school children, no less than these other forms. Social scientists believe that social beliefs, attitudes, capacities, and appetites to manage complex social change evolve through an aggregated measure of self and social awareness.

Equally, psychologists believe that the ability to define ourselves as humans results from social intelligence rather than quantitative intelligence. Therefore, developing social intelligence in school children through integrating subject knowledge should be a focal point in educational research to identify various interventions and programs that can enhance social intelligence among school children. Recent trends in education have led to a proliferation of studies that assess school-based interventions designed to enhance and promote psycho-socio-emotional skills among students (Ansari & Rizvi, 2023; Adewale et al., 2024), assess the impact of social and emotional learning on students'

social and emotional competencies (Domitrovich et al., 2017), and assess the impacts of social and emotional learning for students with special education needs (Hassani & Schwab, 2021). These studies emphasized the importance of integrating subject knowledge into school curricula to develop social intelligence among school children, ensuring sustainability and effectiveness. Factors found to be influencing the development of social intelligence have been explored in several studies. An analysis of school-based interventions used by different researchers, areas of assessment and their impacts on social intelligence development is presented in Table 1.

Table 1. Analysis of School-Based Interventions

Intervention	Methods	Importance	Authors
Social Capabilities	Analyzed school-based intervention and promoted psycho-socio-emotional skills among students -Employed both formal and non-formal programs focusing on self-awareness, socio-emotional learning, and pro-social behavior		Ansari & Rizvi (2023)
Social and Emotional Learning	Analyzed the impact of social and emotional learning on students' socio-emotional competencies. Apply to the ongoing teacher training	Well-implemented SEL enhances students' social skills, academic performance, and emotional regulation	Wigelsworth et al. (2019)
SEL for Students with Special Educational Needs	Analyzed the impacts of SEL for students with special educational needs	Effective in enhancing social-emotional competencies among students with special needs Ensure inclusive practices	Cefai et al. (2018)
Social Intelligence and Academic Achievement	Analyzed the relationship between social intelligence competencies and academic achievement among secondary school students	Students with higher social intelligence tend to perform better academically Social intelligence acts as an indicator of overall students' success	Odofin (2022)
Emotional and Social Intelligence	Analyzed the impact of a training program on improving emotional and social intelligence among secondary school students	Structured training enhances students' competencies in emotional and social intelligence. Ensure effective delivery	Jack and Oguntayo (2020)
Social intelligence in students with Hearing Impairment	Compare the impact of social intelligence of students with and without hearing impairment in mainstream schools	Students with hearing impairment intend to exhibit lower levels of social intelligence. Training should be tailored to support students with hearing impairment for their social development	Adibsereshki and Hatamizadeh (2023)
Drama-Based Interventions in Early Childhood Education	Analyzed the effectiveness of drama-based interventions in improving emotional intelligence among early childhood education students	Improve emotional recognition and expression among children Improve children's creative art skills and social emotional skills	García-Perales et al. (2024)

Table 1 illustrates some of the intervention components used, methodologies, and outcomes by different scholars in integrating subject matter knowledge to develop social intelligence among school children. The information gathered revealed that integrating subject matter knowledge with targeted intervention is essential in developing social intelligence among school children. This has highlighted the importance of integrating social intelligence development into educational curricula.

However, integrating subject instruction, collaborative learning, and culturally responsive pedagogies is generally viewed as a multidimensional development outcome that can be enhanced in forming social intelligence. Previous studies have reported that to offer meaningful scenarios for developing social cognition, cooperative behaviors and emotional awareness, various subject areas such as language, social studies, and mathematics should be integrated into the social context (Savenkov, 2019; Saumantri et al., 2024). These studies emphasized the importance of joint activities in subject-based learning, demonstrating that collaborative problem-solving and role-playing across domains such as the arts and sciences foster empathy, leadership, and conflict resolution skills (Boiko et al., 2025; Savenkov, 2019; Taibolatov et al., 2024b). When curriculum development is grounded in holistic developmental aims, it can enhance multiple intelligences, including social-emotional skills, particularly in early childhood through religious and moral learning integrated across subjects (Kolb, 2014; Maksymchuk et al., 2019). Research by Maksymchuk et al. (2018) and Boiko et al. (2025) also highlights the positive impact of extracurricular activities on students' development. This not only supports overall student growth but also promotes the formation of social intelligence through subject knowledge integration. Equally, forming social competence by embedding interpersonal collaboration within lesson plan subjects could be instrumental to structured educational subjects (Rakhimov et al., 2020). Teacher training plays a very crucial role in this formation, as a digitally saturated environment is essential to sustaining children's interpersonal skills; therefore, equipping educators with tools to foster face-to-face communication is essential (Mezinov & Zakharova, 2019; Taibolatov et al., 2024a; Boiko et al., 2025). As shown in the work of Nurbekova et al. (2023), the use of digital expert systems in evaluating educational content contributes to the formation of students' skills of interaction, reflection and critical thinking, which is an important aspect of developing social intelligence. Previous studies have reported interdisciplinary methods in Indonesia's curriculum to implicitly allow low-grade students to encounter social knowledge via subjects like citizenship and language, suggesting that thematic instruction supports the early development of social frameworks. Equally, Kalyniuk's (2024) study emphasized the importance of blended education as an innovative approach to training, which often incorporates online discussion forums, group projects, and collaborative activities that enhance social intelligence by promoting interaction and teamwork among students. Consequently, the above literature review emphasized that developing social intelligence among school children requires a dynamic, participatory and contextual subject integration relevant to educational strategies. Table 2 shows further analysis of the approach used by different scholars in assessing the formation of social intelligence.

Table 2. Intervention and Approach Used in the Formation of Social Intelligence

S/N	Intervention	Approach	Scholars
1	Model of Social Intelligence Development	Collaborative subject-based tasks in preschool foster key social behaviors like leadership and empathy.	Savenkov (2019)
2	Curriculum Integration	Moral and emotional development through tauhid-based integrated learning boosts social intelligence.	Arini et al. (2022)
3	Social Competence via Educational Subjects	Social skills improve when educational content is linked to cooperative practices.	Rakhimov et al. (2020)
4	Teacher Training and Social Intelligence	Teachers must be trained to address social skill gaps in tech-driven classrooms.	Mezinov & Zakharova, (2019)

However, the rich cultural mosaic of Kazakhstan, which is characterized by over 130 ethnic groups, including Kazakhs, Russians, Uzbeks, and Uighurs, has a deeply intertwined educational landscape. This diversity has led to a multilingual education system where instruction is offered in Kazakh, Russian, Uzbek, Uighur, and Tajik, fostering an environment that emphasizes cross-cultural communication and mutual respect. Kazakhstan's government's commitment to promoting trilingual education has further underscored the importance of equipping students with skills to navigate local and global contexts. The strategic effort to develop students' intellectual capacities through a

curriculum that integrates multiple disciplines resulted from the government's effort to establish specialized institutions like the Nazarbayev Intellectual Schools (NIS). This has promoted critical thinking and collaborative skills among Kazakh students. National trilingual policy and preparing students for international engagement has been promoted in these schools by offering instruction in Kazakh, Russian and English. Moreover, the societal value placed on unity and understanding among diverse populations resulted from cultural practices such as celebrating People's Unity Day. Therefore, integrating subject knowledge into education would serve as a medium for enhancing social intelligence among school children. This will help develop a holistic understanding of societal dynamics, appreciate diverse perspectives, and cultivate the interpersonal skills necessary for effective communication and collaboration among schoolchildren in Kazakhstan's multifaceted society. This integrated educational strategy will prepare students to contribute meaningfully to a cohesive, inclusive national identity and align with the nation's cultural ethos.

This study will identify and address a significant research gap concerning the integration of subject knowledge into the formation of social intelligence of school children in Kazakhstan. This topic remains underexplored despite its growing importance in an increasingly globalized landscape. Previous studies have examined moral and emotional development through tauhid-based integrated learning boosts social intelligence (Arini et al., 2022; Kurmanova et al., 2024) and social intelligence in students with hearing impairment (Khamzin et al., 2023; Adibsereshki & Hatamizadeh, 2023). This study will mainly focus on forming social intelligence in school children by integrating subject knowledge. By employing a quasi-experimental method, the study will provide a rich assessment of the current challenges in the formation of skills. This study was designed to contribute to and improve the formation of social intelligence among school children by underscoring the need for curriculum innovation that will embed intercultural dimensions directly into subject knowledge (Muraina, Hojapoji, & Amao, 2025). The capacity to navigate and manage interpersonal relationships effectively is a function of social intelligence traits. This has been underpinned by several key theories that elucidate development and application. According to Vygotsky's sociocultural theory, learning is inherently a social process, where cultural context fosters cognitive development and interaction with more knowledgeable others within one's environment (Mayer & Salovey, 1997; Kumar, 2024). This highlighted that learning through guided collaboration is the central zone to development.

Albert Bandura's social cognitive theory states that individuals and children acquire knowledge by observing other behaviors and the consequences that follow. Therefore, integrating personal, behavioral, and environmental factors in a triadic reciprocal relationship is necessary for individual development. The three facets of intelligence (analytical, creative and practical intelligence) are demarcated by Robert Sternberg's triarchic theory of intelligence, with the latter closely aligning with social intelligence as it involves the ability to shape, adapt and select the environment effectively.

Therefore, building upon these theoretical frameworks, this study proposes an Integrated Subject-Interdisciplinary Learning (ISIL) model to enhance social intelligence through subject integration. This model emphasizes the deliberate fusion of diverse academic disciplines to create learning experiences that reflect real-world social complexities (Maksymchuk et al., 2019; Semigina et al., 2021; Parmankulova et al., 2023). Furthermore, Maksymchuk et al. (2019) highlighted that examining preschool teacher training models can inform strategies for promoting social intelligence in schoolchildren through subject knowledge integration. In this study, students will participate in collaborative problem-solving tasks and interdisciplinary projects.

The model aims to nurture students in forming and cultivating essential components of social intelligence, such as empathy, communication skills and cultural awareness. For example, to foster empathy and a deeper understanding of social dynamics, the model will integrate literature and history to provide students with insight into diverse cultural narratives. Equally, to promote critical thinking and moral reasoning, the model will combine science and ethics to encourage discussion about the societal implications of scientific advancement. Thus, the ISIL model aims to develop knowledgeable and skillful learners at navigating their environment's societal intricacies through such integrative strategies. Table 3 presents some of the theories used in integrating subject knowledge.

However, when examining the formation of social intelligence in schoolchildren through the integration of subjects, several limitations and conflicting results from previous studies must be considered. Some of the key considerations are that the method of data collection can introduce biases. For example, self-reported data may not always reflect actual behavior. Differences in research design, such as experimental versus survey-based approaches, can also lead to conflicting results. The effectiveness of integrating subject knowledge in enhancing social intelligence may depend on the specific subject involved, such as science-related disciplines, and the teaching methods employed. In addition, research outcomes may be influenced by cultural contexts, making it essential to account for these factors

when interpreting results.

Table 3. Modern Theories Used to Integrate Subject Knowledge

S/N	Theories	Integration strategies
1	Lev Vygotsky's Life and Theories	Learning is a social process influenced by cultural interactions The 'zone of proximal development' emphasizes learning potential through guided collaboration.
2	Social Cognitive Theory	Knowledge acquisition occurs through observation of others Integrating personal, behavioral, and environmental factors.
3	Triarchic Theory of Intelligence	Practical intelligence involves adapting to, shaping, and selecting environments, aligning with social intelligence aspects.

2. Method

A quasi-experimental design will be employed to guide this study in assessing the impacts of integrated subject knowledge in the formation of social intelligence among school children. A sample of 60 students were selected from a middle school in Kazakhstan. The sample was divided equally into two groups of 30 subjects and assigned into an experimental group (n=30) and a control group (n=30). The two sample groups (experimental and control group) are homogenous groups matched on gender, age and baseline academic performance to ensure equivalency.

2.1 Sampling-Procedure

The participants in this study are purposely selected from two comparable classes within the same school. A pre-test was administered using a validated scale such as the Tromso Social Intelligence Scale (TSIS) for the purpose of sample selection and to provide baseline academic performance.

2.2 Intervention

Table 4. Intervention Design and Assessment of Experimental and Control Groups

Group	Activities	Duration	Intensity	Assessment
Experimental	Received treatment through a subject-integrated curriculum (science, social studies)	Original period of the subject was used throughout the period of the study	Weekly intervention was provided through group discussion, role playing, problem solving tasks, and reflection sessions.	A pre-test and post-test was administered to them using TSIS to assess the change in the three domains(Social information, social skills and social awareness)
Control	Received no treatment, normal teaching method procedure was followed through traditional subject-separated curriculum without inter-disciplinary integration or explicit social intelligence-focused activities.	Original period of the subjects was used throughout the period of the study	Weekly teaching method procedure was follow and students were asked to ask question about the topic discussed.	A pre-test and post-test was administered to them using TSIS to assess the change in the three domains(Social information, social skills and social awareness)

For the experimental group, the participants in this group received training via a subject-integrated curriculum that blends content from literature, science and social studies into thematic units for 8 weeks. The participants were engaged in group discussion, role-playing, problem-solving tasks, and reflection sessions, emphasizing cooperation, empathy, and communication. For example, to analyze characters' interpersonal interactions or ethical dilemmas in science to foster moral reasoning, the lesson under this group combines historical events and literary narrative. However, for the control group, the participants were kept constant, no treatment was given, and students' instruction was continued with a traditional subject-separated curriculum without interdisciplinary integration or explicit social

intelligence-focused activities. A pre- and post-test were administered to the two groups using TSIS to assess the change in the three domains (Social information, social skills and social awareness). Table 4 presents information of the intervention activity.

3. Results

The study assesses the impacts of integrated subject knowledge in the formation of social intelligence among school children. The sample had 60 participants; each sample group had 30 participants. Demographic information about the participants is presented in Table 5.

Table 5. Students' Background Information

Group	Number of participants	Age	Male	Female
Experimental	30	13-15	16 (53%)	14 (46.7%)
Control	30	13-15	16 (53%)	14 (46.7%)

Table 6 presents experimental data on the impacts of integrated subject knowledge in forming social intelligence among school children.

Table 6. Post-test Performance on Social Intelligence Assessment

Parameter	Group	Post-test			
		$\bar{X}$	SD	Df	P-value
Integrated Subject Knowledge Method	Experimental	26.80	2.75		
Conventional Instruction Method	Control	20.27	4.61	t(58)=6.67	<0.00001

The post-test analysis revealed a significant difference in performance between the experimental group exposed to integrated subject knowledge and the control group, which did not receive any treatment (conventional instruction). As shown in Table 5, the experimental group achieved a mean score of 26.80 (SD=2.75), while the control group had an average of 20.27 (SD=4.61). The difference in performance was statistically validated through an interdependent t-test, which revealed $t(58) = 6.67$, $p < 0.00001$. This indicated a significant improvement in the experimental group. The finding confirms the H1 hypothesis that subject integration strategies can effectively foster components of social intelligence such as empathy, communication, and collaboration. The finding further highlighted a concentration of higher scores among the experimental group, while the control group had a greater score dispersion and lower central tendency.

The analysis of pre-test and post-test performance is presented in Table 7. Two groups reveal significant insights into the effectiveness of subject integration strategies for enhancing social intelligence. The experimental group, which received treatment for integrating subject knowledge instruction to enhance their social intelligence, demonstrated improvement from 20.87 (SD = 0.90) to a post-test mean of 27.83 (SD = 1.44). The increase in their mean score was statistically significant using a paired t-test value of $t(29) = 23.42$, $p < .001$. On the other side, the control group, which kept constant using the conventional teaching method, demonstrated a modest improvement from a pre-test mean of 20.70 (SD = 0.75) to a post-test mean of 22.90 (SD = 1.79), with $t(29) = 6.40$, $p < 0.001$. To validate the effectiveness of integrated subject knowledge instruction in improving social intelligence among school children, an independent sample t-test comparing post-test scores between the two groups was conducted. The analysis yielded a highly significant result, $t(58) = 11.77$, $p < .001$. This result indicated that the experimental intervention significantly impacted performance more than the traditional approach. These results suggest that integrating subject knowledge in educational settings can substantially enhance social intelligence-related competencies in schoolchildren, providing empirical support for innovative pedagogical strategies.

Table 7. Performance Analysis of Experimental and Control Groups

Parameter			Pre-test		Post-test		t-test		
			$\bar{x}$	SD	$\bar{x}$	SD	df	P-value	df
Integrated Subject Knowledge Method	Experimental		20.87	0.90	27.83	1.44	t(29)=23.42	<.001	
									t(58)=11.7 <0.001
Conventional instruction Method	Control		20.27	0.75	22.90	1.79	t (29)=6.40	<.001	

Table 8 presents a disaggregated analysis of the components of social intelligence, which include empathy, social skills, and conflict resolution. The results revealed that the integration of subject knowledge significantly influenced all three domains.

Table 8. Component-Wise Impact of Subject Knowledge Integration on Social Intelligence

S/N	Component	Mean	Standard Deviation (SD)
1	Empathy	9.11	1.23
2	Social Skills	9.32	1.10
3	Conflict resolution	9.40	0.99

Table 8 revealed that conflict resolution demonstrated the greatest improvement in social intelligence among schoolchildren, influenced by several factors. These include direct application, emotional intelligence, and interactive learning. The present study found that conflict resolution skills are directly applicable in everyday life, making them more tangible and easier to practice. Another important finding was that conflict resolution requires emotional intelligence, empathy, and self-awareness, all of which are essential for the development of social intelligence. A positive correlation was observed between interactive learning and conflict resolution, as conflict resolution activities often involve role-playing, group discussions, and problem-solving, making them engaging and effective for learning. Consequently, the development of conflict resolution skills carries significant educational implications. These include improved relationships, enhanced collaboration, reduced bullying, increased empathy, and better academic performance. Therefore, schoolteachers should emphasize conflict resolution skills in education to help students cultivate essential social intelligence, leading to stronger relationships, higher academic achievement, and overall well-being.

4. Discussion

Therefore, conflict resolution shows the highest relative improvement among the components. The simulated distribution from post-test scores indicated a mean score of 9.11, 9.32, and 9.40, respectively (out of 10), for empathy, social skills, and conflict resolution. This suggests that all components benefited from the intervention. However, conflict resolution is the only component with the highest variability ($SD = 0.99$), which indicates individual improvement and potentially more room for growth influenced by integrative strategies.

Empathy is essential in understanding others' emotions. The participant demonstrated a lower level of empathy and variability, possibly because its development requires sustained interpersonal engagement beyond subject integration. Social skills were moderately impacted, with a balance between consistency and growth among the participants. These findings provide evidence that structured integration of academic content with social learning opportunities can systematically develop children's social intelligence, particularly their ability to resolve conflicts constructively in educational settings.

The present study examines the impact of integrated subject knowledge in forming social intelligence among school children. The study found that integrating subject knowledge into educational practices fosters social intelligence in Kazakhstan and offers both transformative potential and structural complexity (Duman, 2024). A key finding was that integrated curricula provide a more holistic and meaningful learning experience for students, aligning well with the competencies required for social intelligence, such as empathy, collaboration, and conflict resolution. This finding is supported by the studies of Maksymchuk et al. (2018) and Boiko et al. (2025), which identified a positive

relationship between extracurricular activities and students' development. These results emphasize the role of integrated subject combinations in enhancing the formation of social intelligence among schoolchildren in Kazakhstan. The outcomes of the present study indicate that the success of such approaches in experimental settings, where significant improvements were observed in post-intervention scores for components such as conflict resolution, demonstrates the pedagogical potential of integration strategies.

Despite systematic challenges within Kazakhstan's educational landscape, the approach offers many opportunities to enhance school children's social intelligence. Disparities in resource allocation between urban and rural schools, inadequate teacher training in modern pedagogical methods, and structural constraints imposed by rigid curriculum design may limit this opportunity (Taibolatov et al., 2024a). Moreover, regarding subject mastery and social competencies, this study found the opportunity to enhance both areas remains compelling. One essential teaching-related finding was that integrated instruction has been shown to increase student engagement and teacher motivation when supported by targeted professional development and policy reforms (Peng et al., 2024; Tastanbekova, 2020; Seitenov et al., 2020).

The findings from the experimental analysis, which demonstrated marked gains in social intelligence components post-intervention, reinforce the viability of integration as a strategy for pedagogical innovation in Kazakhstan. For systemic impact, it is essential to address contextual limitations through policy-level support, curriculum redesign, and sustained teacher training. This will ensure that the benefits of integrated instruction extend beyond isolated experimental settings and become part of widespread classroom practice. This combined emphasis on addressing systemic challenges while leveraging existing opportunities is crucial for aligning Kazakhstan's education system with global pedagogical trends.

The evidence from this experimental study underscores several critical implications for educational practice in Kazakhstan. First and foremost, the clear gains in social intelligence, particularly in conflict resolution and social skills, demonstrate that integrating subject knowledge into instruction is not merely a curricular innovation but a practical necessity for holistic student development. The results of this study indicate that teachers should be encouraged and trained to design interdisciplinary lessons that blend cognitive learning with social interaction, including collaborative projects, problem-based learning, and thematic instruction.

These approaches appear to enable students to apply subject knowledge in socially meaningful contexts, which naturally cultivates empathy, teamwork, and emotional regulation. The findings suggest that the most substantial improvements occurred in students' abilities to manage interpersonal challenges, reinforcing the importance of embedding structured peer interaction and reflective discussion into classroom routines.

Taken together, the results indicate a need for continuous professional development programs focused on integrated teaching methodologies, along with the creation of curricular flexibility to support thematic, cross-subject planning. This research supports the idea of shifting educational evaluation frameworks to include social competencies alongside academic metrics, thereby ensuring a more comprehensive view of student progress and preparing learners for both academic achievement and active social participation in a diverse, interconnected world.

5. Conclusion

The present study was designed to determine the impact of integrating subject knowledge in the development of social intelligence among school children. The following conclusions can be drawn from the present study. Given the variation in educational resources across regions in Kazakhstan, special attention should be directed toward equipping rural and under-resourced schools with the training and materials needed to implement integrated instruction effectively. This study has shown that integrating subject knowledge into classroom instruction significantly enhances the development of social intelligence among school children, particularly in Kazakhstan. It has also shown substantial improvement in key components such as conflict resolution, empathy, and social skills. This affirms that interdisciplinary teaching methods foster both cognitive and emotional growth. The current findings support the relevance of international educational theories that advocate for holistic, student-centered learning approaches and provide strong empirical support for pedagogical reform in Kazakhstan. The evidence from this study suggests that due to the limitations in sample size, study duration, and potential instructional bias, there is a need for cautious interpretation and further research. Despite these constraints, the results of this study underscore the transformative potential of integrated instruction to cultivate well-rounded learners equipped with the social competencies essential for academic success and civic engagement. Therefore, it is recommended that Kazakhstan's education system prioritize teacher training, curriculum flexibility, and inclusive assessment practices to mainstream integrated pedagogy across diverse learning environments. This work contributes to existing knowledge of social

intelligence by providing evidence that this approach aligns with global educational standards and addresses the specific cultural and systemic challenges within Kazakhstan, offering a scalable model for sustainable educational improvement.

This study has thrown up many questions that need further investigation. Based on the information gathered from the analysis of the experimental group, several key recommendations emerge to enhance the development of social intelligence through integrated subject instruction in Kazakhstan. Firstly, the study recommends that policy and decision-makers in Kazakhstan should promote the systematic inclusion of integrated curricula in both primary and secondary schools, emphasizing activities that combine subject learning with social interaction, such as group problem-solving and interdisciplinary projects. It would be interesting for teacher training programs to update and include modules on designing and implementing integrative pedagogies, ensuring educators are equipped with the theoretical and practical tools necessary for success. Equally, schools around the Kazakhs should be encouraged to adopt flexible timetabling and curriculum structures that allow for thematic teaching across disciplines. Further work must be done to revise the assessment framework and include social competencies such as empathy, teamwork, conflict resolution, and core learning outcomes alongside academic performance. It is recommended that further research be undertaken using larger, more diverse samples and extended timeframes to validate the long-term impact of integration strategies on students' social and academic development. These steps will help institutionalize best practices and ensure that education in Kazakhstan not only imparts knowledge but also cultivates socially intelligent, well-rounded individuals prepared for the demands of contemporary society.

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