

## Development of students' social intelligence in higher education institutions

Desarrollo de la inteligencia social de los estudiantes en las instituciones de educación superior

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### ABSTRACT

In contemporary society we observe rapid growth in the volume, density and complexity of communications, due to the key trends in the development of information technologies and their impact on society. In this regard, the importance of social and communication abilities, skills and knowledge associated with social interactions is significantly increasing. This process dictates the need for their development both within the educational system and beyond. In this context, the social intelligence as a fundamentally important parameter for the development of social interaction abilities and understanding in the social sphere is especially important. Analysis of modern studies in the field of social intelligence, the content and definition of this concept and the features of its development allow us to conclude that it is the most optimal way to develop social intelligence in the framework of language education in higher educational institutions. Social intelligence is an integrative concept and includes a wide variety of abilities, knowledge and skills. The importance and necessity of their development is not in doubt among psychologists and educators. Researchers offer various models for the structure of social intelligence and argue about the components of this concept.

**Keywords:** social intelligence, teaching of foreign language, TRIZ pedagogy (Theory of Invention Problems Solving), language education.

### RESUMEN

En la sociedad contemporánea observamos un rápido crecimiento en el volumen, la densidad y la complejidad de las comunicaciones, debido a las tendencias clave en el desarrollo de las tecnologías de la información y su impacto en la sociedad. En este sentido, la importancia de las habilidades sociales y de comunicación, habilidades y conocimientos asociados con las interacciones sociales está aumentando significativamente. Este proceso dicta la necesidad de su desarrollo tanto dentro del sistema educativo como más allá. En este contexto, la inteligencia social como parámetro fundamentalmente importante para el desarrollo de las habilidades de interacción social y la comprensión en la esfera social es especialmente importante. El análisis de los estudios modernos en el campo de la inteligencia social, el contenido y la definición de este concepto y las características de su desarrollo nos permiten concluir que es la forma más óptima de desarrollar la inteligencia social en el marco de la enseñanza de idiomas en las instituciones de educación superior. La inteligencia social es un concepto integrador e incluye una amplia variedad de habilidades, conocimientos y habilidades. La importancia y la necesidad de su desarrollo no está en duda entre psicólogos y educadores. Los investigadores ofrecen varios modelos para la estructura de la inteligencia social y discuten sobre los componentes de este concepto.

**Palabras clave:** inteligencia social, enseñanza de lenguas extranjeras, pedagogía TRIZ (Teoría de la resolución de problemas de invención), educación en idiomas.

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## INTRODUCTION

The development of cognitive abilities is one of the key functions of higher professional education. This is due to their extraordinary importance for the development of personality, the success of training and the future professional career of graduates of higher educational institutions. Social intelligence is both a cognitive ability and a social ability, as well as a personality trait, so its development is a complicated task (Dunker, 2008; Stepichev, 2012; Quezada-Sarmiento & Enciso, 2016). First of all, the complexity of this task is caused by the fact that social intelligence is a combination of various parameters. The development of individual components of its structure does not necessarily lead to the development of social intelligence as a whole (Tsahaeva et al, 2017; Gnatyuk & Pekert, 2018; Kryuchkova, 2018; Pakdel & Talebbeydokhti, 2018). Russian psychologist S. Belova notes that the development of individual components of social intelligence or parameters related to it (in particular, thinking) does not affect the level of development of social intelligence in general (Belova et al, 2004) Only the steady and sustainable development of all components of the internal structure of social intelligence determines the high level of this parameter (Vygotsky, 2011; Guilford, 1969; Ashmarov, 2018; Kakeh Baraei, 2018).

From the point of view of N.V. Panova, the formation of social intelligence requires taking into account many conditions and factors, such as age, personality, environment etc (Panova, 2011). At the same time, it is virtually impossible to create an optimal environment for the development of all components of social intelligence (Sergeeva & Trubakova, 2017). Based on this provision, it is obvious that the development of students' social intelligence should be a focused process, building on the continuous monitoring of results, compliance with conditions and factors for the effective development of social intelligence (Borisova et al, 2018; Gadzhieva, 2018; Narkevich & Narkevich, 2018; Gadzaov & Dzerzhinskaya, 2018; Din Mohammad et al, 2018).

## LITERATURE REVIEW

C. J. Van Zyl's studies confirmed that it is the language education that has the greatest positive effect on the development of social intelligence, communication abilities and social skills of students (Yüksel & Geban, 2014). However, it should be noted that empirical studies of social intelligence confirm a wide range of rates, even when various highly efficient methods are used for its development (Lasukova, 2015; Van Zyl & de Bruin, 2012). This allows us to make the assumption that social intelligence is a confluence of factors and its internal structure is not highly stable initially, which means that the dynamics of its changes is also unstable. In other words, it is important not only to achieve a high level of social intelligence development, but also the sustainability of changes.

S. Azatyan, O. Romanenko, P. Stepichev note that the development of cognitive abilities, which include social intelligence, would be most effective if students are involved in certain activities that contribute to their development (Azatyan et al, 2012). An example is the development of mathematical abilities in the course of project work, which is based on solving problems, the development of communication skills during disputes, etc. Regarding the social intelligence development, such activities are represented by communicative situations of varying complexity, the solution of which should be arranged in such a way that the educational environment on the one hand promotes creative search and activity, and on the other hand is not too complicated and monotonous for students.

It should be noted that social intelligence develops in activities, social interaction, however, it requires reflection of one's and other people's actions, analysis of social environment and life experiences. Therefore, it is reasonable to assume that the development of social intelligence is most effective in the teaching of humanities, especially language education.

Technologies of the developing education, widely applied in Russia (V.V. Davydov, L.V. Zankov, B.D. Elkonin), are based on the principle of reliance on the child's behavioral and emotional spheres. The development of cognitive interest is carried out through the organization of educational process, which suggests that students possess certain communication system, variable behavioral patterns and collective emotional experiences. At the same time, the emotions of student are perceived by educators and practitioners as a priori and considered as a stable basis for learning and development. The question of ensuring the development of social intelligence from the pedagogical point of view rarely attracts the attention of educators.

In foreign psychological and pedagogical literature, the theory of emotional and intellectual abilities was actively developed by David R. Caruso, John D. Mayer, Peter Salovey (Mayer et al, 2004). The theory of social and emotional competence is considered in the works of D. Goleman, the non-cognitive theory of emotional intelligence is presented in the works of Reuven Bar-On (Bar-On, 2000). In Russian pedagogical science, D.V. Lyusin, M.I. Manoilov developed the problems of social and emotional intelligence. Practical trainings are developed by I.N. Andreeva, S.P. Derevyanko, O.V. Luneva. The psychological and pedagogical conditions for the development of emotional sphere of schoolchildren are investigated by E.V. Belinskaya, O.V. Khukhlaeva, N.P. Lokalova, S.G. Jacobson.

The problem of interconnection between social, emotional intelligence and the content of education is considered in the works of M.V. Korepanova. The process of understanding and verbalization of emotional states in the context of language education is the subject of research by I.O. Karelina, and the influence of linguistic competence on cognitive development is studied by N.N. Ryabonedelya.

Foreign and Russian researchers offer numerous models and programs for the development of social and emotional sphere, mainly aimed at correcting negative psychological conditions: combating fears, reducing aggressiveness, improving relationships with others, etc. With regard to social intelligence, it is assumed that it will naturally develop as children grow

older, when they expand the space of interaction, learn to determine motivation, behavior patterns, emotions, and focus on the psycho-emotional state of other people.

But for the purposeful development of social intelligence, a specially organized educational space is needed, which should be built on the basis of proper pedagogical conditions.

### Proposed Methodology

In this research we consider the conditions necessary for the optimal development of social intelligence by means of a foreign language in a higher educational institution in order to outline the role and potential of using TRIZ-pedagogy (Theory of Invention Tasks Solving).

TRIZ is a Russian word abbreviation that stands for Theory of Inventive Problem Solving or TIPS, which is the equivalent word combination for TRIZ in Russian. TRIZ was developed in 1946 by Genrich Altshuller and his colleagues in the former USSR, and it is now used widely in many countries for solving complex or inventive problems in various fields. It was based on the provision that certain universal principles of invention could be the foundation for creative innovations that help in creating and advancing technology. TRIZ-pedagogy can be called innovative pedagogical model, the main task of which is to develop a creative, bold thinking person (Jani, 2013).

In the framework of theoretical and empirical analysis, we identified several groups of factors that influence the development of students' social intelligence:

- Age and psychological characteristics of students;
- Content and methodology of teaching the subjects of humanitarian cycle;
- Specifics of using various methodological approaches and pedagogical technologies.

These factors are based on studies of the development of students' cognitive abilities presented in the works by S. Barrows and largely related to the methodology and technology of teaching Russian and foreign languages, interrelation of these aspects of language education (Barrows, 2015). Analysis of these factors revealed a number of conditions for the effective development of social intelligence. Thus, the development of social intelligence in the process of learning a foreign language will be successful in case of such organizing the educational process that takes into account the following psychological and pedagogical conditions for the effective development of social intelligence:

1. *Parallel and coherent development of intellectual, social and emotional spheres in the framework of teaching a foreign language.* This condition corresponds to the characteristics of social intelligence, which are most effectively developed in the context of leading activities, but the dynamics of its development significantly depends on the age characteristics of students. The most effective development of social intelligence occurs in adolescence, major dynamics of changes in the parameter is observed in the primary school age (Yüksel & Geban, 2014).

2. *Consideration of age and individual characteristics of students in the social intelligence development.* This condition directly follows from the foregoing and is implemented by modifying the content of education and pedagogical technologies, with the aim of optimizing the development of cognitive and socio-cognitive abilities (Gabanova, 2009). It is important to correlate pedagogical techniques and leading activities of students.

3. *Specifics of various methodological approaches and pedagogical technologies.* The use of appropriate pedagogical technologies and methodological approaches has a significant impact on the content of the lesson and determines the success of educational process. For the effective development of social intelligence, it is necessary to create optimal educational environment, which, taking into account the first described condition, consists in the presence of activities that contribute to the development of intellectual, social and emotional spheres of student's personality, in the framework of foreign language lessons.

In such a case, the use of TRIZ-pedagogy methods and systematic approach seems to be the most fruitful, since it allows us to comply with all the conditions and factors affecting the effectiveness of the social intelligence development, to build optimal algorithm based on purposeful and progressive work in order to obtain a sustainable effect.

In order to confirm the effectiveness of TRIZ-pedagogy methods in the development of students' social intelligence, the statistical analysis of various educational technologies in the given context was conducted. The following statistical methods were used: regression analysis, correlation analysis using the Spearman's Rank correlation coefficient. The results are presented in Table 1.

Table 1. Statistical analysis of the impact of various educational technologies on the formation of students' social intelligence by means of a foreign language

	Correlation with the level of social intelligence	Correlation with the dynamics of changes in the development of social intelligence	Measure of influence on the combination
Traditional forms of teaching foreign languages	0.54	-0.62	-8.4
Problem-based learning	0.61	0.68	+2.6
Developing learning	0.59	0.63	+1.9
Interactive teaching methods			+0.6
TRIZ-pedagogy	0.73	0.77	+11.5

The data presented in Table 1 allow us to conclude that TRIZ-pedagogy is the most effective technology in the context of the development of social intelligence. In our opinion, this is due to the fact that TRIZ-pedagogy contributes to the cognitive activity of students in the best way, helping them to reveal their creative potential, and is best correlated with the conditions for the development of social intelligence. TRIZ-pedagogy methods allow organizing educational activities so that they are adequately saturated with solving non-trivial challenging tasks contributing to the development of cognitive abilities, communication abilities and social intelligence.

It is also important to note that the technology of TRIZ-pedagogy provides a sustainable level of social intelligence development, which is proved by the measure of influence on the totality of these methods, with the help of regression analysis.

## RESULT ANALYSIS

Taking into consideration the research results, we modeled the following algorithm for the social intelligence development by means of a foreign language teaching at a higher educational institution, based on the following organizational aspects of conducting English classes:

1. With regard to the age of students, it is necessary to determine the range of subject tasks that students must solve, both within each individual topic and within the month and semester of training. Educational tasks should be correlated with specific life situations.

2. Modeling the range of subject tasks should be based on the principle of individual approach to learning, in combination with group forms of presentation. Problem solving should occur both individually and in a group, at each lesson. Modeling is correlated with student learning performance.

3. For the first year students, the game form of conducting classes is preferable, for graduation groups a discussion form should be used. The presentation of educational material should be accompanied by active involvement of students in interaction with each other, which contributes to the development of social skills.

4. It is necessary to use communicative tasks based on the analysis of the observed phenomena, its description and prediction of changes. These tasks are best suited for the development of social intelligence and cognitive abilities and at the same time are easily implemented in English language teaching.

5. Maximum use of multimedia in the English classes. Watching films and listening to the music with further discussion is an interesting and exciting activity for students, at the same time contributing to the development of social intelligence due to the fact that students actively analyze social environment, often associated with a different mentality.

6. Persistent reflection by the participants of educational process of their activities and achievements, providing feedback between students and teacher, as well as consolidation of positive results.

Analysis of the research results allows us to conclude that in the context of social intelligence developing by means of a foreign language, the methods of TRIZ-pedagogy are potentially the most effective, which is proved by empirical data obtained in the framework of the study.

The implementation of the algorithm presented in the research work, taking into account the age and individual characteristics of students, observing the principles and key provisions of TRIZ-pedagogy, the conditions and factors affecting the formation of social intelligence, will contribute to effective development of the parameter under consideration by means of a foreign language in higher education.

Based on the obtained data, the model of social intelligence of university students was developed (Table 2).

Table 2. Factor model of social intelligence of university students

Structural component of social intelligence	Operation
Emotional component	Regulation of emotions

Personality component	Development of self-esteem, openness to new ideas
Behavioral component	Regulation of behavior
Communicative component	Ensuring successful communication
Socially perceptive component	The ability to understand and regulate social phenomena, understanding people

Analysis of the results allows us to conclude that social intelligence of students is a complex construct, which includes emotional, personal, behavioral, communicative components, as well as social perception. In its structure, the most significant components of social intelligence are behavioral, emotional, and communicative, which indicate that these characteristics are predominant in the model of student's behavior. Thus, we believe that the development of student's social intelligence should be based on specially organized activities including a large amount of communication. This allows us to confirm the effectiveness of language education for the development of students' social intelligence.

## CONCLUSION

Speaking about the need to develop a set of abilities, qualities and skills, united by the construct of "social intelligence", it should be noted that emotional skills and habits laid down during training at higher educational institutions will become decisive for the rest of life. Moreover, the ability to manage and control emotional sphere has a beneficial effect on the mental and somatic health of students, while the lack of these abilities can lead to alexithymia, a fixed complex of qualities, a personality construct, characterized by inability to identify and describe emotions experienced by one's self or others.

Learning of foreign languages provides certain opportunities for the development of students' social intelligence. In the context of traditional education, foreign language is one of the few subjects within which modeling of various communicative situations is possible. It allows students to imagine themselves outside the classroom walls and work out certain behavioral models in various communication situations. Social intelligence is an important component of successful interactions and can be developed only in the process of communication, modeled on the lessons of a foreign language.

In addition, many experts in the field of linguodidactics believe that teaching a foreign language has a significant impact on the development of learner's personality and, in particular, his/her emotional sphere. In turn, the inclusion of the student's emotional sphere in the process of learning a foreign language contributes to a more successful mastering of it. The emotional sphere, along with the intellectual one, plays a crucial role in the formation of language skills and speech skills in the native and foreign languages. The rapid development of the emotional sphere of students improves the quality of teaching a foreign language at higher educational institutions.

## BIBLIOGRAPHIC REFERENCES

- Ashmarov I.A. (2018). Some approaches to the study of the USSR' military economy in the soviet and russian national historiography. *Historical Bulletin*, 1(2), 19 – 31.
- Azatyán S. A., Romanenko O.S., Stepichev P. A. (2012). Experience in developing the creative potential of schoolchildren in a foreign language lesson. *Modern Humanitarian Studies*, (3).
- Bar-On, R. (2000). Emotional and social intelligence: Insights from the Emotional Quotient Inventory (EQ-i). In R. Bar-On and J.D.A. Parker (Eds.), *Handbook of emotional intelligence: Theory, development, assessment and application at home, school and in the workplace*. San Francisco: Jossey-Bass, 363-88.
- Barrows S.Y. (2015). Child and adult in the educational dialogue/S.Y. Mounds, Moscow, Education, 422.
- Belova S.S. (2004). Social intelligence: a comparative analysis of measurement methods // *Social intelligence: theory, measurement, research*. Ed. D.V. Lyusina, D.V. Ushakova. Moscow: Publishing House Institute of Psychology RAS, 109-119.
- Borisova M.V., Musokhranov A.Yu., Sidorova N.A. (2018). Use of fitness directions elements on physical education classes and their psychomatic impact on students of the special medical group. *Modern Scientist*. Issue 1. P. 6 – 9.
- Din Mohammad, M., Niami, M., & Fattahipoor, M. (2018). The Impact of Applying Lexical Equivalent Corpus on Iranian Translator Trainees' Achievement in the Translation of CompoundComplex Sentences. *UCT Journal of Social Sciences and Humanities Research*, 6(4), 8-12.
- Dunker K. (2008). Approaches to the study of productive thinking. *Reading book on psychology: psychology of thinking / comp. Yu.B. Gippenreiter*. Moscow, AST, 319.
- Gabanova I.T. (2009). The influence of language and culture on the socio-cultural development of individual. *Youth and Science: Reality and the Future. Materials of the II International scientific-practical conference*. Nevinomyssk, 131-132.
- Gadzaov A.F., Dzerzhinskaya M.R. (2018). Mathematical methods of analysis of the periodic components of economic processes. *Modern Economy Success*, 1, 14 – 18.
- Gadzhieva U.B. (2018). Socialization of Personality as a Factor in the Mental, Intellectual and Spiritual-Moral Development. *International Journal of Medicine and Psychology*, 1(2), 17 – 20.
- Gnatyuk S.N., Pekert N. (2018). Education as a factor of sustainable development of agriculture. *Russian Economic Bulletin*, 1(3), 18 – 27.
- Guilford J. (1969). Three aspects of intelligence. *Psychology of thinking*. Moscow, Progress, 712.

- Jani, H.M. (2013). Teaching TRIZ Problem-Solving Methodology in Higher Education: A Review. *International Journal of Science and Research (IJSR)*, India Online ISSN: 2319-7064. Volume 2 Issue 9, September 2013. Available from [www.ijsr.net](http://www.ijsr.net)
- Takeh Baraei, E. (2018). Administrative corruption and the challenges of entrepreneurship development. *UCT Journal of Management and Accounting Studies*, 6(4), 16-25.
- Kryuchkova K.S. (2018). Modular training of future teachers with the use of information technologies in the conditions of virtual academic mobility. *Modern Humanities Success*, 4, 9 – 14.
- Lasukova N. A. (2015). Use of TRIZ techniques and methods in English lessons. *Scientific and methodical electronic journal "Concept"*, 38, 91–95. URL: <http://e-koncept.ru/2015/45126.htm>.
- Mayer, J. D., Salovey, P., & Caruso, D.R. (2004). Emotional intelligence: Theory, findings and implications. *Psychological Inquiry*, 15, 197-215.
- Narkevich L.V., Narkevich E.A. (2018). Financial condition analysis in the crisis management system. *Russian Economic Bulletin*, 1(4), 10 – 24.
- Pakdel, M., & Talebbeydokhti, A. (2018). The Effect of Adjustment Announcement of Predicted Profit on Price and Trading Volume of Listed Companies in Tehran Stock Exchange. *Dutch Journal of Finance and Management*, 2(1), 49. <https://doi.org/10.29333/djfm/5825>
- Panova N.V. (2011). Development of the components of psychological structure of the social intelligence of younger adolescents in the context of school and further education: the dissertation ... candidate of psychological sciences: 19.00.07. Nizhny Novgorod, 214.
- Quezada-Sarmiento, P. A., & Enciso, L. (2016). Knowledge Representation and Ontological Model based on Software Engineering Body of Knowledge as a tool to Evaluate Professional and Occupational Profiles. *Journal of Information Systems Engineering & Management*, 1(3), 199-208. <https://doi.org/10.20897/lectito.201636>
- Sergeev M.G., Trubakova D.I. (2017). Teacher's Reflection Formation as Factor of Effectiveness Children's Social Intelligence Forming. *Modern Scientist*, 7, 62 – 64.
- Stepichev P. A. (2012). Formation of the orientation of the individual towards creativity in vocational education: socio-cultural and psychological-pedagogical aspects. *Replication of the culture of society in the context of vocational education (book 1): monograph / scientific. ed. D.V. Gulyakin*. Georgievsk: SKFU, 533.
- Tsahaeva A.A., Aminov U.K., Aminova D.K. (2017). Driving forces of the development of adaptive behavior of personality: methodological considerations. *Modern Scientist*, 8, 44 – 47.
- Van Zyl C. J., & de Bruin, K. (2012). The relationship between mixed model emotional intelligence and personality. *South African Journal of Psychology*, 42(4), 532-542.
- Vygotsky L.S. (2011). *Thinking and Speech*. Moscow, AST, 637.
- Yüksel M., & Geban, Ö. (2014). The relationship between emotional intelligence levels and academic achievement. *International Online Journal of Educational Sciences*, 6(1), 165–167 <http://dx.doi.org/10.15345/ijoes.2014.01.015>.