



Tools For The Development of Emotional Intelligence: Cognitive Native Language Teaching

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The study is devoted to the establishment of connections between teaching the native language and the emotional intelligence of students. It proved a statistically significant positive effect of the cognitive native (Ukrainian) language teaching on students' emotional awareness, managing one's emotions, self-motivation, empathy, and recognizing other people's emotions. The study describes the method of cognitive native (Ukrainian) language teaching that is based on integrating college students' mental and communicative activities. The participants of the pedagogical experiment were 312 students and 16 teachers from various educational institutions in Ukraine. Hall's method assessed the impact of the cognitive native (Ukrainian) language teaching on students' emotional intelligence. Empirical data were analyzed statistically (significance level 0.05): the Pearson test for confirming the normality of group distributions and the Student's criterion for estimating averages. Statistical analysis showed statistical uniformity of EG and CG at the beginning of the experiment; the significance of changes for the scales "emotional awareness," "self-motivation," and "empathy" in the middle of the study; and the statistical significance of changes for all scales after the experiment.

Keywords: emotional intelligence, development of emotional intelligence, cognitive learning, cognitive language learning method, cognitive activity, professional training

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INTRODUCTION

Statement of the problem

Emotionality is an essential characteristic of human behavior in society, where everyone usually reacts individually to a particular life situation (Shingarov, 1971). A person's reaction forms emotions that depend on one's social experience, the environment, and the formed value system and determines the attitude to this or that event (Golovakha & Panina, 1989). Emotions determine a person's psychological and physiological reactions, which influence his other behavior, form a worldview and values, determine priorities, and determine further actions (Rocklage et al., 2021). A timely detected or realized emotion can affect the correctness of the reaction or the decision made. Therefore, recognizing and understanding emotions becomes crucial for every member of society, which actualizes the problem of forming and developing young people's emotional intelligence. Today, Ukrainian educational institutions are forced to work in war conditions. Teachers become not only a driving force for acquiring knowledge but also a source of balancing emotions, keeping calm, and turning adverse reactions of students into positive ones. Educators should teach students in such a way as to form emotionally stable and sustainable patterns of behavior (Adegboyega, 2019). In this context, the Ukrainian language as the mental basis of the people becomes an instrument of direct influence on the emotional state of a person, and the study of language material provides an opportunity to unblock communication and understand the basis of one's own emotions and actions through language. Given the above, there are reasons to assume the development of emotional intelligence in teaching the native (Ukrainian) language and speech.

Analysis of Current Research

Emotional intelligence (EI) today is identified as a person's ability to understand and manage one's emotions and other people's emotional states, notice their needs, empathize, and regulate thoughts and behavior (D'Amico & Geraci, 2021). Psychologists first discussed its existence at the beginning of the 20th century. Still, full-fledged studies of EI were updated later. Today EI is considered at the meta-emotional level as a combination of emotional abilities and emotional beliefs, self-evaluation of emotional abilities, and self-evaluation of performance: the beliefs about emotions, the self-concept about one's emotional abilities, and the self-evaluation of performance (D'Amico & Guastaferrro, 2017; D'Amico & Geraci, 2023).

Study of EI components

Most of the research on EI is related to the study of its components and the impact of EI on various areas of human life. The structure of EI is fully described in Andreeva (2020) where EI is presented as an integration of personal intellectual characteristics with intellectual competence and instrumental-reflective intelligence (intelligence staff characteristics; intelligence competence instrumental, reflexive intelligence). Based on that interpretation the authors propose a definition of EI: EI (in the narrow sense) is understood as a set of intellectual abilities of a person to understand their own emotions and the ability to manage them; EI (in a broad sense) is an integral cognitive personality formation, which is characterized by the most pronounced cognitive component in

terms of the mental abilities to perceive and manage emotions, the ability to process and transform emotional information, as well as adapt to it. D. Goleman (1998) builds the EI model as an integrative unity of five components: self-knowledge, self-regulation, motivation, empathy, and social skills. Authors of the publication O'Connor et al. (2019) provide an overview of various concepts of EI and summarize recommendations for the selection and use of various indicators of EI from the standpoint of its factor structure.

Impact of EI on labor productivity and educational activity

The analysis of scientific studies revealed results that link EI with success in professional activities. Gerasimova (2018) substantiates the connection of EI with social success, which the author associates with corporate culture. A similar result was obtained by Xuanfang & Xiaoyun (2016) and Sah (2021) confirming the connection between emotional intelligence's direct and indirect influence on labor productivity. In the paper (Soliman et al., 2023), the authors conclude that EI affects flexibility and balancing work and personal life. The authors also conclude that EI determines behavior related to knowledge sharing. The study (Bae et al., 2022) demonstrates the relationship between EI and employment success. According to the results of interviews with civil engineering students, the authors emphasize the importance of improving EI while studying in college.

Analysis of the research results on the relationship between human EI and society shows that people with a higher level of EI are more successful. Results (Kranefeld & Blickle, 2022) make it possible to claim that people with high EI can successfully influence society and achieve high work productivity by regulating their emotions. Since society is a complex structure characterized by various types of relationships and the flow of emotional information will affect individual behavior and have cross-level effects, emotional factors influence people's decisions and behavior. The EI of those in authority can significantly impact the performance of a team or organization (Azouzi & Jarboui, 2014). The article (Editorial Team, 2020) shows that EI is a complex of emotions at the non-verbal level for managing cognitive thinking, understanding the information conveyed by emotions and actions that generate emotions, and regulating emotions, including emotional self-awareness, self-regulation, social skills, empathy, and motivation. Therefore, EI is related to cognitive abilities, and it can be measured by considering the results of activities and controlled at the level of one's own emotions and the emotions of others. Information obtained from training develops emotional intelligence, which is different from but related to practical intelligence. This is confirmed by the research of R. Thorndike (2018) who singled out social intelligence among general intelligence as the ability to understand people and the ability to behave or act judiciously concerning them.

Today, scientific results demonstrate connections or dependencies between learning and EI. The study (Agbaria, 2021) indicates a connection between EI and the ability to organize the educational space effectively. In the article (Bansal, 2020), the authors prove that EI directly affects flexibility in industrial training and the initiation of the self-learning process (self-motivation, self-awareness, intuition, etc.). Scientific studies have proven that the following technologies have a positive influence on the

development of EI: problem-oriented learning (Luy-Montejo, 2019); social-emotional learning (Arslan & İşeri, 2018); productive learning (Li et al., 2017); inclusive education (Drigas et al., 2023), where access for everyone, from everyone, from everywhere and at any time, is essential.

A direct connection between education and EI has been confirmed for musical learning (Miendlarzewska & Trost, 2014). The authors summarize the results of scientific works and prove the influence of music education on intelligence in general and EI in particular. The authors (Jaschke et al., 2013) come to a similar conclusion. The scientific results confirm the remote influence of music education on the individual's intellectual skills, including EI. The study (Muhtadi et al., 2022) confirms the positive impact of emotional intelligence on the results of learning mathematics. Another study (Adegboyega, 2019) shows a significant correlation between students' emotional intelligence and their attitude towards the exam.

Among the articles devoted to the development of EI, a separate group should highlight the results related to studying foreign languages. The study (Jiang et al., 2022) confirms the effectiveness of EI in learning a foreign language through an integrated approach. Increasing the level of EI in the educational environment of English as a second foreign language is presented in the paper (Abdolrezaipoor & Ghanbari, 2022). Another study (Zhu et al., 2022) proves that a high level of EI provides a longer average time to teach a second language (positive perception of learning) to students with a low EI. The research (Ranjan et al., 2021) proved that EI can reduce students' anxiety about learning a foreign language and thus develop their language skills.

So, the generalization of scientific results shows that certain types of teaching (teaching a foreign language, teaching music, teaching mathematics) are a tool for the development of EI. Therefore, it is natural to assume that teaching one's native language can also positively affect the EI.

The study goal and tasks

The study aims to prove the influence of cognitive native (Ukrainian) language teaching on the developing students' EI. The goal determined two tasks:

(task 1) to describe the authors' method of cognitive native (Ukrainian) language teaching;

(task 2) to experimentally check the influence of the authors' method on EI.

METHOD

We used theoretical and empirical methods: modeling to build a model of cognitive teaching of the Ukrainian language; scientific experience generalizing to select the most effective approaches to learning; content analysis for the selection of didactic material; empirical methods (observation of students, conversations with teachers) to determine those teaching forms, techniques, and means that contribute to activating students' learning activities. The authors' teaching methodology is described in detail below.

To confirm the impact of the authors' methodology on EI, we analyzed several tests, in particular: Mayer-Salovey-Caruso Emotional Intelligence Test (MSCEITM),

Emotional Quotient Inventory (EQ-i), Trait Emotional Intelligence Questionnaire (TEIQue), Bar-On Emotional Intelligence Inventory (I-CE) test (their detailed description we found on (Consortium for Research on Emotional Intelligence in Organisations, n.d). However, we rejected these tests because they investigated separate characteristics of EI (e.g., expression of emotions only, emotion regulation only, intrinsic and extrinsic emotional satisfaction, etc.). We were interested in the development of EI in general, so we chose the Hall method (BrainApps, n.d.), which allows us to assess the five characteristics of EI: emotional awareness, managing your emotions, self-motivation, empathy, and recognition of the feelings of others). "Emotional awareness" characterizes a person's ability to realize and understand their emotions and analyze their internal state. "Managing your emotions" represents emotional flexibility, the ability to voluntarily manage emotions. "Self-motivation" characterizes managing one's behavior through the conscious control of emotions. "Empathy" characterizes understanding the feelings of other people, the ability to empathize, as well as the willingness to support and understand the state of a person ("someone else's position"). "Recognition of the feelings of others" characterizes the ability to influence the emotional state of one's environment. This test includes 30 statements. For example, the statements for the "Emotional Awareness" scale look like this: "Negative and positive emotions are a source of knowledge for me about what life decisions to make," "Negative emotions help me realize what I need to change in my life," "I feel a change in my feelings," "I analyze my negative feelings, I am aware of their appearance in my free time," "I am aware of my feelings to maintain a 'good emotional shape,'" "People who are aware of their feelings act logically." Statements for other scales are given in (Fetiskin et al., 2002). Respondents should subjectively assess their minds, from -3 (strongly disagree) to +3 (strongly agree). The answers for each scale determine the EI level: 14 and more – high EI level; 8-13 – medium EI level; 7 and less – low EI level. The general grade of emotional intelligence (sum of all scales) is defined as 70 and over – high EI level; 40-69 – medium EI level; 39 and less – low EI level.

A pedagogical experiment was conducted on implementing the methodology of cognitive teaching of the Ukrainian language. Students of vocational education institutions participated in the pedagogical experiment: VSP "Specialized College of Transport and Computer Technologies of Chernihiv Polytechnic University", VSP "Mechanical Engineering Vocational College of Sumy State University", Communal Institution "Prylutsky Humanitarian - Ivan Franko Pedagogical College of the Chernihiv Regional Council, as well as first-year students of the Makarenko Sumy State Pedagogical University and Sumy National Agrarian University. The Makarenko Sumy State Pedagogical University trainers were involved in developing cognitive teaching methods. The total number of respondents was 312 people (the control group (CG) – 155 people, the experimental group (EG) – 157 people), as well as 16 Ukrainian language teachers. The experiment lasted from March 2022 to December 2022. All participants were familiarized with the conditions of practical training and did not deny their participation in it. The survey was conducted anonymously. In monitoring changes in the development of EI, three control surveys were conducted: March (the first survey at the beginning of the study, initial data), June (the second survey in the middle of the

study), December (the third survey at the end of the study) 2022. Empirical results were subjected to statistical analysis at a significance level of 0.05. We used the Pearson test with the hypotheses "H0: the distribution of EI levels in the group is normal" and "Ha: the distribution of EI levels in the group is not normal" and the Student's test with the hypotheses "H0: the means in CG and EG are statistically the same" and "Ha: the means in CG and EG are statistically different." We performed statistical analysis for each scale separately. The calculations were done using the add-in "Analysis Package" of the MS Excel spreadsheet processor.

FINDINGS

Task 1: Describing the authors' method of cognitive native (Ukrainian) language teaching

The current state of Ukrainian linguistics is characterized by the presence of two main paradigms of scientific knowledge - communicative and cognitive, the synthesis of which is necessary to solve several topical linguistic didactic problems (Grona, 2017). During the analysis of scientific works, communication was noted as an essential tool for developing EI and an effective tool for language learning. Numerous works devoted to the techniques of psychoanalysis became the basis for the involvement of the cognitive approach. Thus, works (Collins, 2021) and (Bustami et al., 2020) proved that cognitive techniques are more effective in identifying, denying, and changing thoughts, beliefs, and ideas. The article (Sam, 2016) details cognitive-behavioral techniques that help people overcome stress experienced in everyday situations or after traumatic events. The authors claim that "negative emotions and thoughts accompanying a stressful situation usually increase the consequences experienced by the body". The developed cognitive methods involve the detection of negativity and the development of problem-solving skills. Therefore, the cognitive approach in linguistic didactics is appropriate when guiding students to consciously learn the rules of using lexical-grammatical and textual models, based on which expressions are built for practical application.

The listed ideas of cognitive and communicative approaches became the basis for developing the methodology of cognitive native (Ukrainian) language teaching in the unity of its components: purpose, content, forms, methods, and means (Fig. 1).

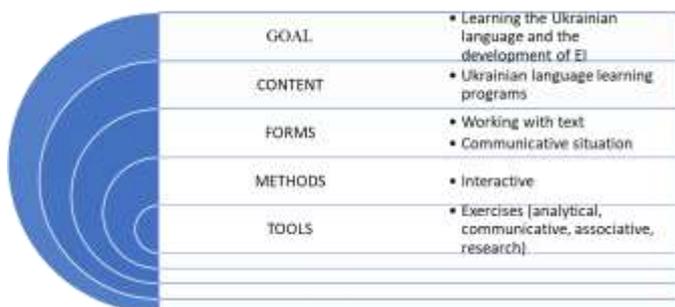


Figure 1
Methods components of cognitive native (Ukrainian) language teaching (*Source: own*)

The programs for teaching the Ukrainian language in educational institutions of Ukraine (secondary school, higher school) are identical, and the methodology of teaching the language is established and based mainly on the textual approach. The educational process involves selecting text material (with authentic, relevant, informative, and situational content). Textual material is used in writing exercises and discussing them, contributing to the assimilation of spelling, grammar, and punctuation rules. The education forms are individual and group forms of work with students. The leading teaching methods are explanatory-illustrative, reproductive, and partial-searching.

In the authors' method of cognitive native (Ukrainian) language teaching, attention is focused on cognitive and communicative approaches. The communicative approach emphasizes interactive teaching methods and communicative exercises. The cognitive approach causes non-traditional teaching methods (analytical, associative, and research exercises).

Detail the authors' method of cognitive native (Ukrainian) language teaching. While teaching the Ukrainian language, teachers paid particular attention to intellectual work with the text. For example, attention was focused on the semantic meanings of language units and categories that characterized the content of the Ukrainian language course. Thus, a more expansive arsenal of semantic meanings of concepts (synonyms) was used to develop the ability to convey different shades of mood in words (Hreb et al., 2019) (Fig. 2).

<p>Read excerpts from poems. Define contextual synonyms. What emotions do they convey?</p>	<p>How do contextual synonyms affect the reproduction of the author's thought?</p>	<p>Explain the meaning of the expressive series of synonyms. Why verbs arranged in order of decreasing intensity?</p>
<p>• "And the most terrible thing is that it burns like a torch, turns the soul over with pity: an unfaithful, lying, alien, disgusting person - but I love him!"; "Lay down, died, killed young"; "... The prayer has probably already been served! And the bells rang, jingled! - That's where the boys were led through the gate"; "He chews, blinks. He is seething with anger"; "And a mercenary, a foreigner, some kind of skin for sale, put that cross in his chest with a sword" (L. Kostenko).</p>	<p>• The crow jumped back, but did not fly away. It seems she understood that Sashka lacked the strength to chase her away... She sat on the road a little far away and waited. But it annoyed him. He shouted, wailed, rehearsed, howled, and, not remembering anything anymore, threw a stone at the crow as if it were a hated enemy. He chased her down the street, bent down and threw sand and stones after her. He shouted loudly, to the entire village, to the entire neighborhood (According to materials from internet sources)</p>	<ul style="list-style-type: none"> • Screamed • Cried out • Rehearsed • Howled • Chased • Throwing

Figure 2

Tasks for intellectual work with the text to develop the ability to convey different shades of mood in words (Source: own)

Considering the transformative function of connected statements, it was essential to actualize students' internal perceptions of these statements. Their thoughts and feelings caused by specific texts were interesting. This approach contributed to developing the ability to perceive the environment and effectively navigate society.

During the analysis of the texts, the students were offered questions and tasks of the following type: What phrases in the text convey contempt? Read the phrases that express complaints. Choose and write down comforting phrases in response to them. Find phrases that convey surprise (Hreb, 2019). Encouraged to interact with tasks such as becoming a co-author of the text and completing the continuation; you are a co-author of the textbook, offer your tasks. It was at the level of the text that clarification of the semantics of the word, its conceptual-emotional connections, and awareness of the stylistic differentiation of the modeling of a coherent statement took place. Emotions became the driving force of text creation - it was necessary to share to express.

The leading types of exercises for working with the text were analytical (related to the analysis of textual material), communicative (involved the involvement of students in active, communicative activities), associative (revealed an emotional-sensual attitude to the textual educational material), research (involved participation in research activity through search, through creating and solving problem situations) (Fig. 3).

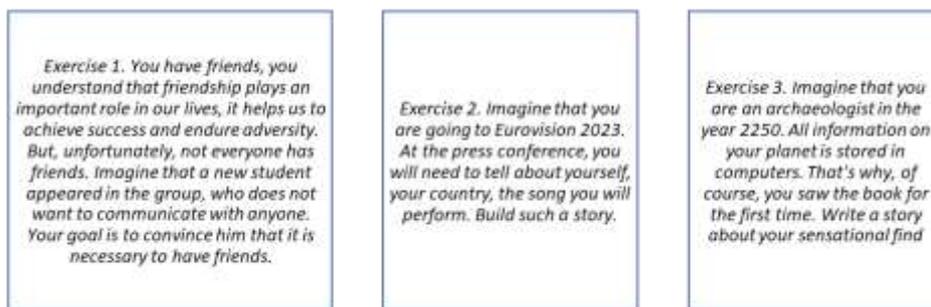


Figure 3
Examples of work with text (*Source: own*)

The communicative situation became effective because it was the starting point of any speech act. Considering the influence of emotional intelligence, the communicative situation was a complex of external conditions of communication and internal emotional states of communicators. In learning, it was crucial to create a motive to put the student in such a situation that he has a need or desire to participate and to communicate (to learn something, to inform someone, to encourage someone to act, to express emotions, etc.).

While developing the exercises, these requirements were completed: compliance with the set goal, a certain level of difficulty, illustrating several aspects of the problem, national authenticity, illustration of a typical situation, provocativeness (application of analysis), controversy, and a diversity of solutions. Also, in the process of creating an exercise, more attention should be paid not to the structure but to the vitality of the situation and the content of the statement. It is vital to bring the learning conditions closer to the natural conditions of communication, introduce the student to a speech situation, and teach him to navigate in it, that is, to imagine the interlocutor, the conditions of speech, and the task of communication. The specificity of the exercises

was that its condition should always be calculated for a specific addressee, without whose communication is simply impossible.

Thus, the method of cognitive native (Ukrainian) language teaching was based on the mental and, at the same time, on the communicative activity of students. The authors' method, in contrast to the traditional one, was based on the mandatory active use of various semantic meanings of language units (synonyms, antonyms) in exercises and tasks: analytical exercises related to the intellectual analysis of textual material, communicative exercises related to the expression of various emotions and attitudes, associative exercises related to the manifestation and argumentation of opinions, research tasks involved discussing and finding ways to solve problems through discussion. The development of exercises and tasks had priority national traditions, typical discussion and provocative situations, and multi-various solutions to the problems posed. Performing exercises and solving problems involved various intellectual operations: analyzing, synthesizing, and diagnosing phenomena; ability to acquire knowledge independently; ability to work with different types of information in the process of assimilation of knowledge.

Task 2: Experimentally check the influence of the authors' method on EI

Three surveys were conducted, which quantitatively assessed the level of emotional intelligence in different periods of implementation of the developed methodology of cognitive teaching of the Ukrainian language. They were systematized in Table 1.

Table 1
The average score in groups after three surveys

Scale type	March		June		December	
	CG	EG	CG	EG	CG	EG
Emotional awareness	7.5	7.4	7.7	8.9	9.6	10.7
Management of their own emotions	7.8	7.6	8.0	8.8	10.7	11.6
Self-motivation	8.5	8.3	8.7	9.8	10.4	11.9
Empathy	8.0	8.2	8.7	9.7	10.6	12.1
Recognition emotions of other people	7.5	7.7	7.8	8.3	9.9	11.3

The distribution of EI levels according to each scale is shown in Table 2.

Table 2
Distribution of EI levels in CG and EG by scales

Groups		Low level		Average level		High level	
		Number of persons	%	Number of persons	%	Number of persons	%
Emotional Awareness							
CG	March	69	44.5%	76	49.0%	10	6.5%
	June	65	41.9%	80	51.6%	10	6.5%
EG	March	72	45.9%	75	47.8%	10	6.4%
	June	51	32.5%	95	60.5%	11	7.0%
CG	June	65	41.9%	80	51.6%	10	6.5%
	December	60	38.7%	85	54.8%	10	6.5%
EG	June	51	32.5%	95	60.5%	11	7.0%
	December	32	20.4%	113	72.0%	12	7.6%
CG	March	69	44.5%	76	49.0%	10	6.5%
	December	60	38.7%	85	54.8%	10	6.5%
EG	March	72	45.9%	75	47.8%	10	6.4%
	December	32	20.4%	113	72.0%	12	7.6%
Manage your emotions							
CG	March	62	40.0%	88	56.8%	5	3.2%
	June	53	34.2%	97	62.6%	5	3.2%
EG	March	65	41.4%	87	55.4%	5	3.2%
	June	52	33.1%	99	63.1%	6	3.8%
CG	June	53	34.2%	97	62.6%	5	3.2%
	December	49	31.6%	96	61.9%	10	6.5%
EG	June	52	33.1%	99	63.1%	6	3.8%
	December	39	24.8%	105	66.9%	13	8.3%
CG	March	62	40.0%	88	56.8%	5	3.2%
	December	49	31.6%	96	61.9%	10	6.5%
EG	March	65	41.4%	87	55.4%	5	3.2%
	December	39	24.8%	105	66.9%	13	8.3%
Self-motivation							
CG	March	51	32.9%	89	57.4%	15	9.7%
	June	49	31.6%	90	58.1%	16	10.3%
EG	March	55	35.0%	89	56.7%	13	8.3%
	June	52	33.1%	92	58.6%	13	8.3%
CG	June	49	31.6%	90	58.1%	16	10.3%
	December	39	25.2%	98	63.2%	18	11.6%
EG	June	52	33.1%	92	58.6%	13	8.3%
	December	33	21.0%	105	66.9%	19	12.1%
CG	March	51	32.9%	89	57.4%	15	9.7%
	December	39	25.2%	98	63.2%	18	11.6%
EG	March	55	35.0%	89	56.7%	13	8.3%
	December	33	21.0%	105	66.9%	19	12.1%
Empathy							
CG	March	63	40.6%	78	50.3%	14	9.0%
	June	59	38.1%	82	52.9%	14	9.0%
EG	March	65	41.4%	80	51.0%	12	7.6%
	June	61	38.9%	83	52.9%	13	8.3%
CG	June	59	38.1%	82	52.9%	14	9.0%
	December	32	20.6%	107	69.0%	16	10.3%
EG	June	61	38.9%	83	52.9%	13	8.3%
	December	31	19.7%	110	70.1%	16	10.2%
CG	March	63	40.6%	78	50.3%	14	9.0%

Groups		Low level		Average level		High level	
		Number of persons	%	Number of persons	%	Number of persons	%
EG	December	32	20.6%	107	69.0%	16	10.3%
	March	65	41.4%	80	51.0%	12	7.6%
	December	31	19.7%	110	70.1%	16	10.2%
Recognizing other people's emotions							
CG	March	71	45.8%	75	48.4%	9	5.8%
	June	69	44.5%	77	49.7%	9	5.8%
EG	March	68	43.3%	79	50.3%	10	6.4%
	June	65	41.4%	81	51.6%	11	7.0%
CG	June	69	44.5%	77	49.7%	9	5.8%
	December	53	34.2%	89	57.4%	13	8.4%
EG	June	65	41.4%	81	51.6%	11	7.0%
	December	38	24.2%	107	68.2%	12	7.6%
CG	March	71	45.8%	75	48.4%	9	5.8%
	December	53	34.2%	89	57.4%	13	8.4%
EG	March	68	43.3%	79	50.3%	10	6.4%
	December	38	24.2%	107	68.2%	12	7.6%

Statistical analysis of the distributions according to the Pearson test confirmed their normality at the significance level of 0.05. Statistical analysis (Table 3) of averages according to the student's criterion showed: statistical uniformity of averages for EG and CG at the beginning of the experiment; the significance of changes in averages for the scales "emotional awareness", "self-motivation", "empathy" within the experiment (June); the significance of changes in averages after the experiment (in December) for all scales.

Table 3
Statistics*

Scale type	Emotional awareness	Managing your emotions	Self - motivation	Empathy	Recognizing other people's emotions	
March	Average KG	7.5	7.8	8.5	8.0	7.5
	Average EG	7.4	7.6	8.3	8.2	7.7
	χ^2 , KG	0.06	0.05	0.05	0.03	0.05
	χ^2 , EG	0.06	0.05	0.06	0.04	0.05
	t	0.8	0.5	0.6	0.3	0.5
June	Average KG	7.7	8.0	8.7	8.7	7.8
	Average EG	8.9	8.8	9.8	9.7	8.3
	χ^2 , KG	0.06	0.04	0.06	0.05	0.04
	χ^2 , EG	0.06	0.04	0.06	0.04	0.07
	t	2.0	1.5	2.2	2.1	1.1
December	Average KG	9.6	10.7	10.4	10.6	9.9
	Average EG	10.7	11.6	11.9	12.1	11.3
	χ^2 , KG	0.07	0.07	0.06	0.07	0.06
	χ^2 , EG	0.06	0.07	0.06	0.07	0.05
	t	2.8	3.4	3.9	4.1	3.8

*Critical values: Pearson test 5.99; Students' criterion 1.97

So, according to the research results, there are reasons to claim that the developed method of cognitive native (Ukrainian) language teaching contributed to the development of students' EI.

DISCUSSION

The study demonstrates that cognitive teaching of the native language can be a tool for developing EI. Students studied their native (Ukrainian) language based on a method based on cognitive and communicative approaches. At the beginning of the experiment (the beginning of a full-scale invasion), emotional instability prevailed, and learning was suspended (forced vacations) or occurred asynchronously (students worked as they could). Due to objective circumstances, classes could not be held according to the schedule. Teachers noted constant mood changes in students: "At first sad, then anxious, anger was felt." According to teachers' observations, students delved more into their inner world. Therefore, the classes actively used a communicative approach and performed analytical exercises describing situations requiring comparisons, comments, arguments, etc. In the middle of the experiment (according to Table 4), we observe a statistically significant increase in the indicators "emotional awareness", "self-motivation", and "empathy". Students realize they are in new conditions indefinitely during adaptation, so they must learn to accept the circumstances. Therefore, we used a cognitive approach and associative and research-type exercises. The teachers noted that students learned to analyze their own emotions, were more adequately aware of their condition, and understood the reasons for deterioration or improvement in their emotional state; students were more motivated to distract themselves and therefore studied more willingly, realized the importance of learning or discussing something new. Students began better to understand the feelings of their relatives and friends. The December results showed a statistically significant difference from the March results. As the teachers noted, the students accepted the realities of life and began to study following the new conditions.

In general, the obtained results are consistent with other scientific outcomes. Scientists define emotional intelligence as the ability to analyze one's emotions and use emotional knowledge to improve thinking processes (Mayer et al., 2004). Emotional intelligence is the result of the interaction of intelligence and emotions. It correlates with a person's ability to understand and manage emotions (Cherry et al., 2013). It makes it possible to change feelings during the educational process, particularly in learning the Ukrainian language.

An indispensable component of emotional expression is attribution (explanation of one's actions and actions) (Dasborough & Ashkanasy, 2002), which was considered in developing the authors' methodology. As students received emotional information, they explained and analyzed the emotion through an attribution process, including the source of the feeling and the motivations and intentions of the individuals with that emotional information. It ensured that they were aware of the patterns of correct behavior in various possible situations.

Our study is consistent with the results of research on the dependence of EI on foreign language learning (Garbenis & Palujanskienė, 2021) and (Ebrahimi et al., 2018a),

which show that emotional intelligence is significantly correlated with language learning strategies and learning styles. Scientists recommend focusing on various language activities and developing intellectual skills (analysis, comparison, analogy, evaluation) when forming EI. These recommendations align with our chosen approaches (cognitive and communicative) in the authors' methodology of cognitive teaching of language that we have developed. We used a variety of language activities and relied on intellectual operations when performing the designed exercises: analysis, synthesis, comparison, ranking, etc. The study (Muhtadi et al., 2022) proves the correlation between emotional intelligence and intellectual mathematics achievement. Therefore, scientists recommend focusing on various language activities and forming intellectual skills (analysis, comparison, analogy, evaluation) when forming EI.

The feasibility of using a cognitive approach is also substantiated in the study (Purnomo et al., 2021), which shows the positive impact of the cognitive approach on the development of critical thinking and the peculiarities of perception and memorization of information. Our results suggest a similar effect of the cognitive approach on the ability to analyze situations in the native language using a variety of language units. A direct connection between critical thinking and EI is confirmed in (Christodoulakis et al., 2023), which ensures the feasibility of using the methodology of cognitive teaching of the native language, too. The authors' method of teaching the native language is based on active teaching methods, which strengthens the results (Lozano et al., 2022) on the feasibility of using active teaching methods for EI development. Research (Ebrahimi et al., 2018a; Ebrahimi et al., 2018b) confirms a direct link between EI and reading and writing skills. Our findings are similar and suggest a link between language proficiency and EI in general.

Our research confirms this result, as the development of empathy and the ability to recognize other people's emotions has been confirmed under the influence of cognitive language learning. The specified features characterize the EI of society in the corresponding time and space interval. Our research is consistent with the results (Galustyan et al., 2019) regarding the more remarkable development of empathy (understanding other people's emotions) and self-motivation (managing one's behavior because of managing emotions). Research has confirmed that emotional resilience is correlated with emotional flexibility, manifested in the ability to manage emotions, be aware of one's emotions, and develop self-awareness.

CONCLUSIONS

The conducted research has some implications for stakeholders. Educational institutions should consider the importance of developing emotional intelligence based on cognitive and communicative approaches when organizing training. The awareness of native language teachers about the connection between EI and language teaching is essential. Therefore, the professional training of native language teachers or the professional development of teachers should include the formation of relevant knowledge and skills. Implementing methods aimed at the development of EI is essential for society today. Therefore, along with high-quality professional training of young people, the problems of training teachers who can organize the appropriate educational process are

actualized. In addition to training classes and professional communication, the teacher must ensure psychologically safe contact with participants in the educational process, form positive motivation, and create a favorable atmosphere of collective creativity. Therefore, forming teachers' skills to recognize emotions, react to them, and build relationships based on this knowledge is also a problem that requires independent research. In the preparation of Ukrainian language teachers for the implementation of the described method of cognitive native (Ukrainian) language teaching, we see the appropriate use of contextual learning technologies, which gradually takes into account: a conscious understanding of the system of knowledge about the text, an understanding of modern problems in the field of text creation and possible ways to solve them; reproduction of knowledge in typical situations of text-creating activity; formation of modeling skills, situational and emotional tasks; identification and development of creativity in the creation of situational exercises (analytical, communicative, associative, research). The result of such preparation should be the formation of skills related to the implementation of successful text activity - the ability to create texts of various styles and genres, considering specific extralinguistic factors (sphere of communication, situation, addressed goals and tasks of communication, etc.).

REFERENCES

- Abdolrezapour, P., & Ghanbari, N. (2022). Emotional-based pedagogy and facilitating EFL learners' perceived flow in online education. *Frontiers in psychology, 13*, 960287. <https://doi.org/10.3389/fpsyg.2022.960287>.
- Adegboyega, L. O. (2019). Influence of Moderating Variables on Nigerian Undergraduates' Emotional Intelligence and Attitude towards Examination. *International Journal of Instruction, 12*(2), 651-666. <https://doi.org/10.29333/iji.2019.12241a>.
- Agbaria, Q. (2021). Classroom Management Skills among Kindergarten Teachers as Related to Emotional Intelligence and Self-Efficacy. *International Journal of Instruction, 14*(1), 1019-1034. <https://doi.org/10.29333/iji.2021.14160a>.
- Andreeva, IN (2020). Emotional intelligence: from metaphor to integrative phenomenon. *Voprosy psychology, 5*, 34-44.
- Arslan, S., & İşeri, İ. (2018). Social emotional learning and emotional intelligence: the predicting role of emotional intelligence. *International Journal of Happiness and Development, 4*(2), 113-122. <http://dx.doi.org/10.1504/IJHD.2018.10013184>.
- Azouzi, M. A., & Jarboui, A. (2014). CEO emotional intelligence and firms' financial policies. Bayesian network method. *Contemporary Economics, 8*, 5-24. <https://doi.org/10.5709/ce.1897-9254.128>.
- Bae, H., Polmear, M., & Simmons, D.R. (2022). Bridging the Gap between Industry Expectations and Academic Preparation: Civil Engineering Students' Employability. *Journal of civil engineering education, 148*(3), 04022003. [https://doi.org/10.1061/\(ASCE\)EI.2643-9115.0000062](https://doi.org/10.1061/(ASCE)EI.2643-9115.0000062).

- Bansal, K. (2020). A relative study of emotional intelligence he self-directed learning. *Materials Today: Proceedings*, 37, 2934-2937. <https://doi.org/10.1016/j.matpr.2020.08.701>.
- BrainApps (n.d.). *Hall Emotional Intelligence Test*. Retrieved from <https://brainapps.io/test/holl>.
- Bustami, Y., Wahyuni, F. R. E., Syafruddin, D., Marsela, & Nur, T. D. (2020). JiRQA Learning Model of Based Gender: Cognitive teaching Students in Environmental Pollution Material. *International Journal of Instruction*, 14(1), 17-28. <https://doi.org/10.29333/iji.2021.1412a>.
- Cherry, M., Fletcher, I., & O'Sullivan, H. (2013). The influence of medical students' and doctors' attachment style and emotional intelligence he their patient – provider communication. *Patient Educ Couns*, 93(2), 177–87. <https://pubmed.ncbi.nlm.nih.gov/23747090/>.
- Christodoulakis, A., Kritsotakis, G., Gkorezis, P., Sourtzi, P., & Tsiligianni, I. (2023). Linking Learning Environment and Critical Thinking through Emotional Intelligence: A Cross-Sectional Study of Health Sciences Students. *Healthcare* (Basel, Switzerland), 11(6), 826. <https://doi.org/10.3390/healthcare11060826>.
- Collins, Ch. (2021). What are cognitive techniques? <https://draftlessig.org/what-are-cognitive-techniques/>.
- Consortium for Research on Emotional Intelligence in Organisations (n.d.). *Emotional Intelligence Measures*. Retrieved from <https://www.eiconsortium.org/measures/measures.html>.
- D'Amico, A., & Geraci, A. (2021). The Role of Emotional and Meta-Emotional Intelligence in Pre-adolescents' Well-Being and Sociometric Status. *Frontiers in psychology*, 12, 749700. <https://doi.org/10.3389/fpsyg.2021.749700>.
- D'Amico, A., & Guastaferrero, T. (2017). Emotional and meta-emotional intelligence as predictors of adjustment problems in students with Specific Learning Disorders. *International journal of emotional education*, 9(2), 17-30.
- D'Amico, A., & Geraci, A. (2023). Beyond emotional intelligence: The new construct of meta-emotional intelligence. *Frontiers in Psychology*, 14, 1096663. <https://doi.org/10.3389/fpsyg.2023.1096663>.
- Dasborough, M. T., & Ashkanasy, N. M. (2002). Emotion and attribution of intentionality in leader – member relationships. *The Leadership Quarterly*, 13(5), 615–634. [https://doi.org/10.1016/S1048-9843\(02\)00147-9](https://doi.org/10.1016/S1048-9843(02)00147-9).
- Drigas, A., Papanastasiou, G., & Skianis, C. (2023). The School of the Future: The Role of Digital Technologies, Metacognition and Emotional Intelligence. *International Journal of Emerging Technologies in Learning (iJET)*, 18(09), 65–85. <https://doi.org/10.3991/ijet.v18i09.38133>.

- Ebrahimi, M. R., Khoshsima, H., & Zare-Behtash, E. (2018a). The Impacts of Emotional Intelligence Enhancement on Iranian Intermediate EFL learners Writing Skill. *International Journal of Instruction*, 11(1), 437-452. <https://doi.org/10.12973/iji.2018.11130a>.
- Ebrahimi, M. R., Khoshsima, H., & Zare-Behtash, E. (2018b). The Impacts of Enhancing Emotional Intelligence on the Development of Reading Skill. *International Journal of Instruction*, 11(3), 573-586. <https://doi.org/10.12973/iji.2018.11339a>.
- Editorial Team (2020). Resilient Educator. *Daniel Goleman's emotional intelligence theory explained*, 11. <https://resilienteducator.com/classroom-resources/daniel-golemans-emotional-intelligence-theory-explained/>.
- Fetiskin, N.P., Kozlov, V.V., & Manuilov, G.M. (2002). Diagnostics of "emotional intelligence" (N. Hall). Socio-psychological diagnostics of personality development and small groups. M., Publishing House of the Institute of Psychotherapy, 57-59.
- Galustyan, O. A., Zakharenko, L. M., & Yurchenko-Shekhovtsova, T. I. (2019). Peculiarities of the emotional intelligence of specialists conducting surveys using the polygraph of the National Police of Ukraine. *Legal psychology*, 1(24), 74-84.
- Garbenis, S., & Palujanskienė, P. (2021). Development of emotional intelligence in the aspect of personality development in the context of a learning organisation. society. Integration. education. Proceedings of the *International Scientific Conference*, 4, 90-101. <https://doi.org/10.17770/sie2021vol4.6477>.
- Gerasimova, V. (2018). Emotional Intelligence. *Modern journal of language teaching methods*, 8(11), 600-608.
- Goleman, D. (1998). *Working with Emotional Intelligence*. Bantam Books.
- Golovakha, E. I., & Panina, N. V. (1989). *Psychology of human mutual understanding*. Kyiv.
- Grona, N.V. (2017). *Preparation of students of pedagogical colleges for the formation of text-writing skills in younger schoolchildren*. Nizhin: PP Lysenko M.M.
- Hreb, M., Hrona, N., Kulyk, O., Ovsienko, L., & Chemonina, L. (2019). Tools for Electronic Language Pedagogy in the Training System of a Future Primary School Teacher. *Journal of History Culture and Art Research*, 8(4), 186-196. <http://dx.doi.org/10.7596/taksad.v8i4.2227>.
- Jaschke, A. C., Eggermont, L. H., Honing, H., & Scherder, E. J. (2013). Music education and its effect on intellectual abilities in children: a systematic review. *Reviews in the neurosciences*, 24(6), 665–675. <https://doi.org/10.1515/revneuro-2013-0023>.
- Jiang, P., Akhter, S., Azizi, Z., Gheisari, A., & Kumar, T. (2022). Exploring the role of content and language integrated learning approach in developing transversal skills in university students with respect to the mediating role of emotional intelligence. *Frontiers in psychology*, 13, 988494. <https://doi.org/10.3389/fpsyg.2022.988494>.

- Kranefeld, I., Blickle, G. (2022). Disentangling the relationship between psychopathy and emotion recognition ability: A key that reduced workplace aggression? *Personality and Individual Differences*, 184(4). <https://doi.org/10.1016/j.paid.2021.111232>.
- Li, D.F., Liu, Zhang, X.L., Wang, M.Y., Wang, D., & Shi, J.N. (2017). Fluid intelligence, emotional intelligence, and the Iowa Gambling Task in children. *Intelligence*, 62, 167-174.
- Lozano, A., López, R., Pereira, F. J., & Blanco Fontao, C. (2022). Impact of Cooperative Learning and Project-Based Learning through Emotional Intelligence: A Comparison of Methodologies for Implementing SDGs. *International journal of environmental research and public health*, 19(24), 16977. <https://doi.org/10.3390/ijerph192416977>.
- Luy-Montejo, C. (2019). Problem Based Learning (PBL) in the Development of Emotional Intelligence of University Students. *Propósitos y Representaciones*, 7(2), 353-383. <http://dx.doi.org/10.20511/pyr2019.v7n2.288>.
- Mayer, J.D., Salovey, P., & Caruso, D.R. (2004). Emotional intelligence: Theory, findings, and implications. *Psychological Inquiry*, 15(3), 197-215. https://doi.org/10.1207/s15327965pli1503_02.
- Miendlarzewska, E. A., & Trost, W. J. (2014). How musical training affects cognitive development: rhythm, reward and other modulating variables. *Frontiers in neuroscience*, 7, 279. <https://doi.org/10.3389/fnins.2013.00279>.
- Muhtadi, A., Pujiriyanto., Syafruddin, K., Hukom, J., & Samal, D. (2022). A meta-analysis: Emotional intelligence and its effect on mathematics achievement. *International Journal of Instruction*, 15(4), 745-762. <https://doi.org/10.29333/iji.2022.15440a>.
- O'Connor, PJ, Hill, A., Kaya, M., & Martin, B. (2019). The Measurement of Emotional Intelligence: A Critical Review of the Literature and Recommendations for Researchers and Practitioners. *Frontiers in Psychology*, 10, 1116. <https://doi.org/10.3389/fpsyg.2019.01116>.
- Purnomo, D., Bekti, S., Sulistyorini, Y., & Napfiah, S. (2021). The analysis of students' ability in thinking based on cognitive teaching style. *Anatolian Journal of Education*, 6(2), 13-26. <https://doi.org/10.29333/aje.2021.622a>.
- Ranjan, R., Philominraj, A., & Saavedra, R. A. (2021). On the relationship between language learning strategies and language proficiency in Indian universities. *International Journal of Instruction*, 14(3), 73-94. <https://doi.org/10.29333/iji.2021.1435a>.
- Rocklage, M.D., Rucker, D.D., & Nordgren, L.F. (2021). Mass-scale emotionality reveals human behaviour and marketplace success. *Nature human behaviour*, 5, 1323-1329. <https://doi.org/10.1038/s41562-021-01098-5>.
- Sah, V. (2021). Impact of Emotional Intelligence on Job Performance and Techniques to Improve Emotional Intelligence. *Pacific business review international*, 13(9), 24-29.

Sam, M.S. (2016). *Cognitive Techniques For Stress Management*. Retrieved from <https://psychologydictionary.org/cognitive-techniques-for-stress-management/>.

Shingarov, G.Kh. (1971). *Emotions and feelings as a form of reflection of reality*.

Soliman, M., Sinha, R., Di Virgilio, F., Sousa, M. J., & Figueiredo, R. (2023). Emotional Intelligence Outcomes in Higher Education Institutions: Empirical Evidence From a Western Context. *Psychological reports*, 332941231197165. <https://doi.org/10.1177/00332941231197165>.

Taheri, H., Sadighi, F., Bagheri, M.S., & Bavali, M. (2019). EFL learners' L2 achievement and its relationship with cognitive intelligence, emotional intelligence, learning styles, and language learning strategies. *Cogent Education*, 6, 1655882. <https://doi.org/10.1080/2331186X.2019.1655882>.

Thorndike, E. L. (1918). Intelligence and its use. *Harper's Magazine*, 8, 227–235.

Xuanfang, Hou, Xiaoyun, Shao (2016). Mechanism Research of Emotional Intelligence. Proceedings of the 2016 4th International Education, Economics, Social Science, Arts, Sports and Management Engineering Conference (IEESASM 2016), 22, 178-181. <https://doi.org/10.2991/ieesasm-16.2016.40>.

Zhu, F., Yang, J., & Pi, Z. (2022). The interaction effects of an instructor's emotions in instructional videos and students' emotional intelligence on L2 vocabulary learning. *Educational technology research and development*, 70(5), 1695-1718. <http://doi.org/10.1007/s11423-022-10148-2>.