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# Emotional Intelligence as a Predictor for Learning Motivation of High School Students within Digitalization

Gulshat F. Shakirova\* (a), Marina V. Fedorenko (b), Marina V. Belousova (c)

(a), (b) *Kazan Federal University, 420008, Kazan (Russia), 18 Kremlyovskaya street,  
gkharis@gmail.com\**

(c) *FSBEIFPE RMACPE MOH Russia, 420012, Mushtary St., 11, Kazan, Russian Federation,  
belousova.marina@mail.ru*

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## Abstract

Digitalization of education during the pandemic of COVID-19 fosters the problem of learning motivation of high school students, the polarity in the development of emotional intelligence may appear. The purpose of the study was to identify the relationship between indicators of learning motivation and emotional intelligence in terms of digitalization among high school students. The sample consisted of 63 high school students aged 16 to 17 years. Research methods were questionnaires: "Learning motivation of high school students" (Lukyanova & Kalinina, 2004); "Motivation for success and fear of failure" (Rean, 1999); "Test of emotional intelligence" (Lyusin, 1999); "Emotional intelligence test" (Hall, adapted by Knyazev, Mitrofanova & Bocharov, 2013). The results of the study showed the domination of the affiliation and social motivation of high school students. It means the desire to take a certain position in relations with others and the necessity to have authority in the referent group. The relationship between the general level of emotional intelligence of high school students and the general level of learning motivation was determined. It was recognized that emotion as a special type of knowledge is related to the category of "intelligence" and enables a person to successfully adapt to changing conditions. Emotions and intellect allow motivation to solve cognitive tasks and to build constructive communication.

*Keywords:* learning motivation, emotional intelligence, high school students, digitalization.

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\* Corresponding author. E-mail: gkharis@gmail.com

## **Introduction**

Learning motivation is an essential condition for the productive mastering of knowledge and development of the required learning competencies. Personal motivation is directly determined by the need that dominates at a given age. Adolescence is a period characterized by a change in value and personal identity, developing a view of the world and self-awareness, as the main neoplasm of the psyche. The learning activity is gradually losing its priority and significance at this age. Along with cognitive activity, high school students tend to show interest in building interpersonal relationships and involve in the reference group.

It is known that the leading activity of high school students is communication with peers, building their own communicative model, searching for the reference group. They have the desire to acquire a certain status in the group and maintain it in the intra-group hierarchy. It is important to gain recognition and assert oneself in a peer group, to feel significant and in demand while communicating.

Successful adaptation and productive social interaction are possible against the background of formed emotional intelligence and developed skills of self-control and psychological and emotional regulation. The main derivatives of emotional intelligence should be developed by high school students. The ability to control their emotions and recognize the emotions of others helps high school students to build meaningful interpersonal relationships. The ability to control their own emotions and motivate themselves to master the material is an essential quality for high school students to carry out successful learning activities (Fedorenko et al., 2019).

## **Purpose and objectives of the study**

The purpose of the study is to identify the relationship of learning motivation and emotional intelligence among high school students within digitalization.

## **Literature review**

The importance of the study is confirmed by an increasing number of studies about the relationship between emotional intelligence, cognitive activity and learning success of high school students.

The results of the study (Lavrijsen et al., 2021) based on the data of a large-scale survey of 3002 Flemish seventh-graders, confirmed that the high need for cognition (as a tendency to actively participate in cognitive activity and receive joy from it) determined in some high school students, contributes to their higher motivation and internal involvement in their work. It has an impact on the success of the cognitive activity of high school students.

Vaquero-Diego et al. (2020) in their study examined the relationship between emotional intelligence, success in learning, and social performance of Brazilian high school students. The researchers attempted to identify the relationship between the main aspects of emotional intelligence and social factors (including demographic and family characteristics). This study included 11,370 high school students aged 12 to 17 years. Processing of the results was made with the help of the TTMS-24 test. The results of the study made it possible to draw a conclusion about the importance of studying the emotional self-perception of high school students and the need to introduce and promote emotional education in school.

In modern literature, high school students' motivation relates to the teacher's professional attitude. Meylan et al. (2020) considered educational methods that contribute to the appearance of emotional burnout and low motivation of high school students to go to school. An analysis of the questionnaires of 287 high school students aged 14 to 19 years studying in a public high school in French-speaking Switzerland showed a connection between school burnout and teacher behavior and their motivation to study. This is important information for the subsequent development of preventive measures against school burnout.

Romano et al. (2020) studied the effect of student emotional intelligence and teacher emotional support on the development of school burnout. The study involved 493 Italian high school students aged 14 to 19. An inverse relationship has been demonstrated between emotional intelligence, emotional support of the teacher, and the development of school burnout.

According to Liu et al. (2021), the study of the emotional background and motivation to achieve the success of 512 students revealed a significant role of teacher support in stimulating student motivation and increasing students' creative self-efficacy.

Umarji et al. (2021) studied emotional reinforcement of the initiative and motivation of high school students studying in a public school. It has a positive effect on the success in mastering mathematics and motivation to study. This study describes teachers' influence on developing learning motivation mathematics in a linguistically and ethnically diverse sample of high school students ( $n_1 = 1926$ ;  $n_2 = 1531$ ). Researchers came to the conclusion that teachers' involvement, demonstration of concern about students, improves high schools students' learning motivation.

Using the pedagogical model of personal and social responsibility of Valero-Valenzuela et al. (2020) throughout the academic year has significantly and positively influenced learning motivation, student satisfaction and social climate in the classroom. The study aimed to analyze motivation and social climate in the classroom while using a mixed methodological approach and a combination of a pedagogical model of personal and social responsibility. The sample consisted of 54 high school students aged 11 to 16 years.

The results of the study showed an increase in motivation, responsibility, satisfaction and social climate in the classroom.

Emotional support can be provided not only by teachers but also by high school students. Studying motivation for reading, Schreuder and Savitz (2020) found that increased work and emotional engagement mount up during communication and social interaction. In this case, motivation to learn is positively influenced by one of the components of emotional intelligence - the ability to successfully communicate with others, recognizing one's own emotions and adequately perceiving the emotions of others.

To develop high school students' learning motivation and emotional intelligence, it is recommended to use modern methods, including interactive software. According to Silva et al. (2020), high school students should be more actively motivated to develop STEM (Science, Technology, Engineering and Mathematics) competencies through the didactic and methodological work of teachers and the integration of digital technologies in education.

Emphasizing the importance of emotional intelligence development, it is proposed to use not only diagnostic tools but also trainings with the use of video games. The positive experience of making such trainings, developing the competence of emotional intelligence, is given by Carissoli & Villani (2019). The sample consisted of 121 high school students aged 14 years. The participants were divided into control and experimental groups. It was «EmotivaMente» training which contained eight sessions (each lasting 1.5 hours). These sessions were attended by first-year students. The emotional competencies of participants were assessed at the end of each session, generalized after eight sessions and refreshed three months later. The results suggested an improvement in the indicators of emotional intelligence immediately after the training in the experimental group, but the differences in the two groups after 3 months were not found. The researchers noted a change in the strategies of self-regulation after the training in the experimental group. They began using a cognitive strategy of emotion regulation. Researches concluded that video game training is beneficial for the development of high school students' emotional intelligence.

## **Methodology**

The sample consisted of 63 high school students aged 16 to 17: 31 girls and 32 boys.

The following techniques were used for diagnostics:

1. "Learning motivation of high school students" (Lukyanova & Kalinina, 2004). Scales: personal learning significance; ability to set goals; cognitive/social motivation; domination of internal or external motivation;

the student's desire to achieve academic success or avoid failure; motives for activity.

2. "Motivation for success and fear of failure" (Rean, 1999). Scales: to avoid failure (fear of failure) or to achieve success (hope for success).

3. Test of emotional intelligence (Lyusin, 1999).

Studied indicators:

- InterEI scale (interpersonal EI) - the ability to understand the emotions of other people and control them;
- IntraEI scale (intrapersonal EI) - the ability to understand own emotions and control them;
- UE scale (understanding emotions) - the ability to understand one's own and other people's emotions;
- EC scale (emotional control) - the ability to control one's own and other people's emotions;
- UOPE subscale (understanding other people's emotions) - the ability to understand the emotional state of a person based on external manifestations of emotions (facial expressions, gestures, sound of a voice) and/or intuitively; sensitivity to the inner states of other people;
- COPE subscale (control of other people's emotions) - the ability to evoke certain emotions in other people, to decrease the unwanted emotions; partly - the tendency/ability to manipulate people;
- UOE subscale (understanding own emotions) - the ability to become aware of one's own emotions: its recognition and identification, understanding of the reasons, the ability to verbalization;
- COE subscale (control own emotions) - the ability and need to control one's own emotions, evoke and maintain desired emotions and keep unwanted ones under control;
- CE subscale (control of expression) - the ability to control the external manifestations of emotions.

4. Emotional intelligence test (Hall, adapted by Knyazev, Mitrofanova & Bocharov, 2013). Scales:

- emotional awareness - awareness and understanding emotions, constant replenishment of one's own vocabulary of emotions. People with high emotional awareness are more aware of their inner state than others;

- control of one's own emotions - emotional disposition, emotional flexibility, voluntary control of one's own emotions;
- self-motivation - control of one's own behavior by controlling emotions;
- empathy - understanding the emotions of other people, the ability to empathize with the current emotional state of another person, the willingness to provide support. This is the ability to understand the state of a person by facial expressions, gestures, shades of speech, posture;
- recognition of other people's emotions - the ability to influence the emotional state of other people.

## **Results**

The types of motives selected by the high school students, according to the "Learning motivation of high school students", are ranked as follows: cognitive motivation and affiliation and social motivation (62%); learning motivation and personal motives for activity (23%); assessment motives (7%), reflecting the desire to achieve goals without further self-improvement. And finally, there were external motives (4%), indicating desire to avoid learning failure, which prevails over the desire to achieve success, the absence of behavior to achieve motives for learning. Social motives (0%) in this hierarchy were not identified.

Analysis of these techniques by the types of motives which are selected by the participants of the study made it possible to identify the domination of affiliation and social motivation over the others in the whole sample.

Domination of affiliation and social motivation may be due to the age characteristics of the high school students. If the adolescent is ignored and/or rejected by a group that is significant for him/her, then the negative emotional, personal and behavior reactions are reflected on training activities and would be involved to cognitive activity. Therefore, affiliation and social motivation, as a reflection of the social status of a high school student, play a significant role in education.

Table 1. Comparative analysis of "Learning motivation of high school students" (Lukyanova & Kalinina, 2004) using Student's T-test

		Personal learning significance	The ability to set goals	Cognitive/social motivation	The final level of motivation	Domination of internal or external motivation	The desire to succeed or avoid failures	Motives for activity
Girls	Mean	23,72	20,5	19,31	63,53	11,25	12,19	12,19
	Standard Deviation	2,33	2,86	2,61	5,83	10,08	6,59	9,41
Boys	Mean	24,19	21,16	18,61	63,97	12,9	12,9	14,52
	Standard Deviation	2,30	2,56	3,30	5,43	7,39	6,93	12,07
	T <sub>value</sub>	0,81	0,97	-0,93	0,31	0,74	0,42	0,85
	T <sub>crit.value</sub>	1,67	1,67	1,67	1,67	1,67	1,67	1,67
	p-value	p≤0,1	p≤0,1	p≤0,1	p≤0,1	p≤0,1	p≤0,1	p≤0,1

There were no differences found in the scales: the “personal learning significance”, the “ability to set goals”, the “final level of motivation”, the “domination of internal or external motivation”, the “desire to succeed or avoid failures” and the “motives for activity”.

To sum it up, external motives of boys determine participation to learning activities more often than girls.

As a rule, high schools boys are not always diligent in completing assignments. They often need external control and a reminder from an adult, which is an indicator of the external motives of learning. Girls, on the other hand, are more diligent in completing the teacher's assignments and many of them do not need external stimuli to complete the assignment.

Table 2. Comparative analysis of the "Motivation for success and fear of failure" (Rean, 1999) using Student's T-test

		Motivation for success	Fear of failure
Girls	Mean	15,88	12,5
	Standard Deviation	1,81	0,55
Boys	Mean	15,00	12,06
	Standard Deviation	0,89	0,85
	T <sub>value</sub>	2,07	1,42
	T <sub>crit.value</sub>	1,68	1,76
	p-value	p≤0,1	p≤0,1

The results of the "Motivation for success and fear of failure" revealed reliable gender differences in learning motivation - to achieve success or avoid failure. Boys are more often than girls are motivated for success. Adolescents focused on achieving success are more confident of themselves and their effectiveness; they can be described as responsible, initiative and active. These gender differences may be explained by the desire of young men to understand the meaning of their work/tasks. Awareness that they do work correctly is enough for girls. The awareness of the work performed help boys to be more motivated for the success of their activities. The motivation of avoiding failure is not identified.

The indicators of the learning motivation of boys and girls do not have significant differences. However, the influence of external motives to learning activities occurs more often in the group of boys. In general, high



school students prepare the choice of affiliation and social motivation. There is a significant difference between the group of boys and girls are the focus of motivation for success, which is more often manifested in the group of boys.

Table 3. Comparative analysis of the Emotional intelligence test (Lyusin, 1999) using Student's T-test

	Girls		Boys		T <sub>value</sub>	T <sub>crit.value</sub>	p-value
	Mean	Standard Deviation	Mean	Standard Deviation			
UOPE subscale	24,38	4,31	24,36	4,41	-0,02	1,67	$p \leq 0,1$
COPE subscale	19,69	3,57	20,71	3,11	1,21	1,67	$p \leq 0,1$
UOE subscale	16,97	3,95	20,19	3,09	<b>3,62</b>	<b>2,67</b>	$p \leq 0,01$
MOE subscale	13,72	3,99	16	2,97	<b>2,58</b>	<b>2</b>	$p \leq 0,05$
CE subscale	11,5	3,58	12,42	2,95	1,11	1,67	$p \leq 0,1$
InterEI scale	44,06	7,3	45,07	6,57	0,57	1,67	$p \leq 0,1$
IntraEI scale	41,91	9,49	48,61	7,12	<b>3,18</b>	<b>2,67</b>	$p \leq 0,01$
UE scale	41,03	7,89	44,55	6,9	<b>1,89</b>	<b>1,67</b>	$p \leq 0,1$
EC scale	44,84	8,94	49,12	6,83	<b>2,14</b>	<b>2</b>	$p \leq 0,05$
General level of EI	86,19	15,22	93,68	11,87	<b>2,18</b>	<b>2</b>	$p \leq 0,05$

There were significant differences between the groups of girls and boys in "understanding one's own emotions", "emotional control", "intrapersonal emotional intelligence", "understanding emotions", "general level of emotional intelligence". These indicators are higher in the group of boys. Thus, boys have a better-developed understanding and control of their emotions and emotional intelligence in general than girls.

Table 4. Comparative analysis of Emotional intelligence test Hall, adapted by Knyazev, Mitrofanova & Bocharov, 2013) using Student's T-test

	Girls		Boys		T <sub>value</sub>	T <sub>crit.v</sub> alue	p-value
	Mean	Standard Deviation	Mean	Standard Deviation			
Emotional awareness	8,91	4,61	10,29	4,5	1,21	1,67	p≤0,1
Control own emotions	1,06	8,26	7,61	6,02	3,61	2,67	p≤0,01
Self-motivation	8,06	7,15	11	4,23	1,99	1,67	p≤0,1
Empathy	10,34	5,33	8,71	5,47	-1,2	1,67	p≤0,1
Recognition of other peoples' emotions	8,72	5,41	8,07	6,27	-0,44	1,67	p≤0,1
General level of emotional intelligence	37,28	22,07	45,68	21,21	1,54	1,67	p≤0,1

The indicators of emotional intelligence such as the ability to “control one’s own emotions”, "self-motivation" in the group of boys are significantly higher than in the group of girls. The general level of emotional intelligence among boys turned out to be higher than in the group of girls. These results are consistent with the results of the “Emotional intelligence test” by Lyusin (1999).

There were significant differences in the group of high school students. The indicators of the boys’ emotional intelligence are significantly higher in the scales: "control one’s own emotions", "understanding one’s own emotions", "self-motivation", "intrapersonal emotional intelligence" and "general level of emotional intelligence".

In order to identify the relationship between the indicators of the scales in the study, the Pearson correlation coefficient is used. Correlation matrixes are compiled to determine the relationship between learning motivation and emotional intelligence. The Data of the correlation matrix in the group of girls is presented in Table 5.

Table 8. Correlation matrix by Pearson criterion (Girls)

	Personal learning significance	Ability to set goals	Cognitive/social motivation	Dominant of internal or external motivation	Motivation for success and fear of failure	Motives for activity
Motivation for success and fear of failure	0,207	0,003	0,127	0,295	0,519	0,045
UOPE subscale (understanding other people's emotions)	0,027	<b>0,445**</b>	<b>0,486***</b>	-0,227	-0,200	<b>0,369**</b>
COPE subscale (control of other people's emotions)	0,051	0,265	<b>0,444**</b>	-0,168	-0,025	0,213
UOE subscale (understanding own emotions)	0,013	<b>0,607***</b>	<b>0,371**</b>	-0,250	0,077	<b>0,532***</b>
COE subscale (control own emotions)	0,064	<b>0,479**</b>	<b>0,372**</b>	-0,015	0,196	0,240
CE subscale (control of expression)	-0,272	0,186	0,045	0,027	0,020	0,091
InterEI scale (interpersonal EI)	0,041	<b>0,392**</b>	<b>0,504***</b>	-0,216	-0,130	<b>0,322*</b>

IntraEI scale (intrapersonal EI)	-0,122	<b>0,530***</b>	0,266	-0,167	0,081	<b>0,331*</b>
UE scale (understanding emotions)	-0,019	<b>0,553***</b>	<b>0,440**</b>	-0,203	-0,057	<b>0,477**</b>
EC scale (control of emotions)	-0,052	<b>0,393**</b>	<b>0,362**</b>	-0,055	0,088	0,223
Emotional awareness	-0,057	0,275	0,300	-0,122	0,081	<b>0,726***</b>
Control own emotions	0,026	<b>0,444**</b>	<b>0,444**</b>	-0,001	-0,103	<b>0,338*</b>
Self-motivation	-0,040	0,252	<b>0,525***</b>	0,294	-0,058	0,295
Empathy	0,109	0,202	<b>0,437**</b>	0,106	-0,132	0,152
Recognition of other people's emotions	-0,017	0,101	<b>0,320*</b>	0,095	-0,154	0,057

Notes:

0.32 \* - Pearson correlation coefficient at the significance level  $p \leq 0.1$

0.39 \*\* - Pearson's correlation coefficient at the significance level  $p \leq 0.05$

0.73 \*\*\* - Pearson's correlation coefficient at the significance level  $p \leq 0.01$

A reliable relationship is revealed between the general level of learning motivation (“Learning motivation of high school students” test) and the general level of emotional intelligence ( $r_{xy} = 0.44$ ;  $p \leq 0.05$ ; test of emotional intelligence by Lyusin (1999)).

A reliable relationship is revealed between the indicators of learning motivation and emotional intelligence. “Goal-setting” correlates with the ability to “control one's emotions” ( $r_{xy} = 0.48$   $p \leq 0.05$ ; test of emotional intelligence by Lyusin); ( $r_{xy} = 0.44$ ;  $p \leq 0.05$ ; Hall’s test of emotional intelligence); the ability to “understand one's emotions” ( $r_{xy} = 0.61$ ;  $p \leq 0.01$ ); the ability to “understand other people's emotions” ( $r_{xy} = 0.45$ ;  $p \leq 0.05$ ); “emotional control” ( $r_{xy} = 0.39$ ;  $p \leq 0.05$ ); the ability to “understand emotions” ( $r_{xy} = 0.55$ ;  $p \leq 0.01$ ); “interpersonal emotional intelligence” ( $r_{xy} = 0.39$ ;  $p \leq 0.05$ ); “intrapersonal emotional intelligence” ( $r_{xy} = 0.53$ ;  $p \leq 0.01$ ).

A reliable connection is revealed between the indicator of learning motivation – “cognitive and social motives” - and the ability to “understand one's emotions” ( $r_{xy} = 0.37$ ;  $p \leq 0.05$ ); “control one’s own emotions” ( $r_{xy} = 0.37$   $p \leq 0.05$ ; test of emotional intelligence by Lyusin); ( $r_{xy} = 0.44$   $p \leq 0.05$ ; Hall’s test of emotional intelligence); “understand the emotions of other people” ( $r_{xy} = 0.49$ ;  $p \leq 0.01$ ); “control the emotions of other people” ( $r_{xy} = 0.44$ ;  $p \leq 0.05$ ); “emotional control” ( $r_{xy} = 0.36$ ;  $p \leq 0.05$ ); “understanding emotions” ( $r_{xy} = 0.44$ ;  $p \leq 0.05$ ); “interpersonal emotional intelligence” ( $r_{xy} = 0.504$ ;  $p \leq 0.01$ ); “the level of empathy” ( $r_{xy} = 0.44$ ;  $p \leq 0.05$ ); “recognition of other people’s emotions” ( $r_{xy} = 0.32$ ;  $p \leq 0.1$ ); “self-motivation” ( $r_{xy} = 0.53$ ;  $p \leq 0.01$ ).

A reliable connection is between indicators “motives for activity” and “understanding one’s own emotions” ( $r_{xy} = 0.53$ ;  $p \leq 0.01$ ); “understanding the emotions of other people” ( $r_{xy} = 0.37$ ;  $p \leq 0.05$ ); “understanding emotions” ( $r_{xy} = 0.48$ ;  $p \leq 0.05$ ); “control one’s own emotions” ( $r_{xy} = 0.34$ ;  $p \leq 0.1$ ); “interpersonal emotional intelligence” ( $r_{xy} = 0.32$ ;  $p \leq 0.1$ ); “intrapersonal emotional intelligence” ( $r_{xy} = 0.33$ ;  $p \leq 0.1$ ); “emotional awareness” ( $r_{xy} = 0.73$ ;  $p \leq 0.01$ ). The emotional intelligence contributes to “motives for activity” in the group of girls.

Table 6. Correlation matrix by Pearson criterion (Boys)

Personal learning significance	Ability to set goals	Cognitive/social motivation	Domination of internal or external motivation	Motivation for success and fear of	Motives for activity

					failure	
Motivation for success and fear of failure	0,207	0,003	0,127	0,295	<b>0,519***</b>	0,045
UOPE subscale (understanding other people's emotions)	0,027	<b>0,445**</b>	<b>0,486***</b>	-0,227	-0,200	<b>0,369</b>
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Notes:

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0.73 \*\*\* - Pearson's correlation coefficient at the significance level  $p \leq 0.01$

A reliable connection between the general level of “learning motivation” and the level of “emotional intelligence” is not identified; there is a reliable connection between the indicators of “learning motivation” and “emotional intelligence”. Such an indicator of learning motivation, as the “motives for activity” correlates with the ability to “control one’s own emotions” ( $r_{xy} = 0.5$ ;  $p \leq 0.01$ ; test of emotional intelligence by Lyusin;  $r_{xy} = 0.69$ ;  $p \leq 0.01$ ; Hall’s test of emotional intelligence); “intrapersonal emotional intelligence” ( $r_{xy} = 0.36$ ;  $p \leq 0.1$ ); “emotional control” ( $r_{xy} = 0.33$ ;  $p \leq 0.1$ ); “empathy” ( $r_{xy} = 0.37$ ;  $p \leq 0.05$ ); “recognition of other people’s emotions” ( $r_{xy} = 0.49$ ;  $p \leq 0.05$ ); the level of “self-motivation” ( $r_{xy} = 0.57$ ;  $p \leq 0.01$ ).

There is a reliable connection between the “motivation to succeed” and the ability to “empathy” ( $r_{xy} = 0.36$ ;  $p \leq 0.1$ ); ability to “control one’s own emotions” ( $r_{xy} = 0.31$ ;  $p \leq 0.1$ ; test of emotional intelligence by Lyusin;  $r_{xy} = 0.35$ ;  $p \leq 0.1$ ; Halls’ test of emotional intelligence); the ability to “recognize the emotions of other people” ( $r_{xy} = 0.4$ ;  $p \leq 0.05$ ); the level of “self-motivation” ( $r_{xy} = 0.52$ ;  $p \leq 0.01$ ).

The ability to “set goals” correlates with the “emotional control” ( $r_{xy} = 0.35$ ;  $p \leq 0.1$ ; test of emotional intelligence by Lyusin;  $r_{xy} = 0.46$   $p \leq 0.05$ ; Hall’s test of emotional intelligence); the ability to “control expression” ( $r_{xy} = 0.48$ ;  $p \leq 0.05$ ); the level of “intrapersonal emotional intelligence” ( $r_{xy} = 0.36$ ;  $p \leq 0.1$ ).

According to the correlation matrix, it can be seen that the “personal meaning of learning” has a reliable correlation with “understanding emotions” ( $r_{xy} = -0.34$ ;  $p \leq 0.1$ ) and “understanding other people’s emotions” ( $r_{xy} = 0.35$ ;  $p \leq 0.1$ ).

The reliable connection between the “general level of emotional intelligence” and the Learning motivation of high school students according to both samples ( $r_{xy} = 0.237$ ;  $p \leq 0.1$ ) is revealed.

The next differences between the groups of girls and boys are mentioned:

1. There is a relationship between “personal meaning of learning” and “understanding of other people’s emotions” in the group of girls.
2. The relationship between “emotional intelligence” and cognitive motivation appeared in the group of girls.
3. There is a correlation between “motivation to success” and “emotional intelligence” between the ability to set goals and control of expressions in the group of boys.
4. The relationship between indicators of learning motivation and emotional intelligence is found in the group of girls.

## Discussions

The analysis of emotional intelligence and learning motivation of high school students showed that the results of the study are comparable to Lavrijsen et al. (2021) about relationship of high school students learning motivation with emotional intelligence.

The results of the study relate to the conclusions of Vartanova (2020) about the age transformation and gender differentiation of learning motivation. Vartanova (2020) underlines that motivation to status is represented in the group of boys and learning motivation in the group of girls.

We share the opinion of Romano et al. (2020) and Meylan et al. (2020) about the importance of emotional teacher’s support for students to maintain high cognitive activity and learning motivation.



Along with Vaquero-Diego et al. (2020), it is necessary to develop all the components of emotional intelligence during learning at school.

Through the improvement of emotional intelligence, the ability to recognize and control one's own emotions and the ability to understand the emotional background of another person and adapt to it during communication is an important task. It is a preventive component of destructive behavior forms and addictive patterns observed in the group of high school students. Emotional intelligence helps to evolve cognitive flexibility, stress resistance and adaptability, in the development of emotional awareness and socially responsible behavior. All these qualities are required for successful training and social interaction and have a significant positive impact on the self-consciousness of high school students and their motivation to knowledge in general.

## **Conclusion**

The results of the study show that:

- indicators of learning motivation in the group of high school students do not have significant differences. High school students choose affiliation and social motivation. However, boys more often than girls have an impact on the learning activities connected with external motives;
- the study of motivation revealed that the focus of motivation for success significantly more often appears in the group of boys;
- emotional intelligence presents reliable differences: the overall level of emotional intelligence is higher in the group of boys;
- “emotional control” and “self-motivation” is higher in the group of boys.

The results of the study can be used in educational psychology and avoid negative personal and behavior reactions as a part of interpersonal communication and social cooperation, as well as allow teachers and psychologists to plan and accomplish preventive work on the development of the competencies about learning motivation and emotional intelligence.

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