



The Management of Emotional Intelligence in the Development of Critical Thinking of Trujillo Students in Peru

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ABSTRACT:

In the educational field, emotional intelligence and the development of critical thinking, have become a central axis, due to the urgent need to train students with the ability to judge and confront ideas, but not subjectively, but rather objectively, being able to argue their positions with scientific evidence, essential aspects for the development of people who have an innate curiosity and that is strengthened through of research, thus responding to the demands and constant changes of a globalized society. The main objective of the research was to establish the degree of relationship between emotional intelligence and critical thinking of students in the third grade of the secondary level of an experimental educational institution in the city of Trujillo in Peru. The methodology used was of basic type, with a quantitative approach, of correlational scope and with a non-experimental and transactional design, the measurement instruments used were two questionnaires with 25 and 30 items respectively, these instruments were submitted to the validity process through the Delphi judgment technique and reliability by a pilot test, As main results it has been possible to show that the members of the study sample have a regular level in terms of the management of emotional intelligence and critical thinking, at the inferential level a correlation coefficient of $r_s = 0.977$ was obtained, which indicates a very high relationship and a p-value of 0.000, lower than the level of significance (0.05), which allows the hypothesis of the researcher to be accepted.

1. Introduction

Critical thinking and emotional intelligence are central axes of educational work, due to the prevailing need to train students who are able to question, investigate, judge and argue, from their critical position and with a scientific basis, how to live assertively, in a globalized society, full of situations or problems to face and in constant change. A few years ago, UNESCO (2017) stated that it was necessary for education systems to ensure the obtaining of more complex knowledge, as well as the consolidation of the intellectual and socio-emotional skills of students; Although, at present, with the insertion of new technologies applied to the educational field, as well as the constant progressive changes that are generated in societies, for the formation of critical and socio-emotional skills of the student population, this has ceased to be an educational

option and has become an important need[1]. On the other hand, critical thinking is of great importance in the educational field, since knowledge cities require students who are able to put into practice their skills for analysis, synthesis of information, critical assessment and argumentation capacity, as well as being able to organize their cognitive skills and use them efficiently for the construction of academic projects with solid theoretical and scientific bases. Critical thinking, although there is not a full consensus to consider it as a general skill, can be worked in the same way in different areas or as a specific skill or related to a particular area, originating with them various types of critical thinking[2].

One of the main problems faced by educational institutions in the teaching-learning process is the aspect of emotional intelligence, which is described as an



emotional balance in the personal and interpersonal aspects of students, so that the management of emotions inevitably becomes part of the concept of intelligence of the person and the profile of a subject[3]. On the other hand, the importance of the development of critical thinking in students cannot be ignored, since it is one of the main central purposes, which currently guides actions in education and pedagogy[4]. Other authors such as García (2019), argue that emotions are very important for the exercise of reason, this is how, between the dance of feeling and thinking, it is emotion that guides our decisions, moment after moment, working hand in hand with the rational mind and training thought itself[5].

The execution of critical skills can generate a significant influence on the social performance of students, this is because students trained as critical thinkers can become citizens, who through their reflective judgment can act ethically and honestly, free of ambiguities and with a predisposition to solve problems [6]. For the above, it can be said that the development of critical thinking in students plays an important role, since, it is constituted as one of the most valued student skills for the learning process of students, critical thinking, in general terms, refers to the exercises of questioning and assessment, which allow to be able to make a judgment, taking a position of respect for an idea, phenomenon or fact.

Having carried out the analysis of the problems of the study, the previous studies that correspond to the research are described below, as well as the formulation of the questions and objectives of the research.

2. Background, Motivation and Objective

Among the previous studies that correspond to the research variables, there are those developed by: Luque et al. (2022), who conducted an investigation in order to describe the level of emotional intelligence and school climate of primary school children in three European countries, exploring the association of school climate and emotional intelligence and analyzing the moderating role of gender and country. The study sample was made up of 1 104 schoolchildren from the countries of Spain (528), Poland (252) and Norway (324), of which 50.6% were girls, the data collection instruments used was a self-report validated in the three languages, having the following results; In the

descriptive analysis, higher levels of emotional intelligence were achieved in Spanish schoolchildren, as well as a higher level of school climate; On the other hand, it was girls who demonstrated higher levels of emotional repair than boys. The inferential analysis showed that there are significant levels of association between school climate and emotional intelligence[7]. In the research carried out by Vaquero et al., (2022), it was sought to analyze the mediating role of different types of motivational regulations in the relationship established between emotional intelligence and physical activity. A sample of 431 secondary school students aged between 12 and 16 years was available, the information collection instrument used was the self-reported questionnaire of emotional intelligence, motivation and physical activity. As main results, it was found that there is a statistically positive and significant association between these three study variables; These results conclude the importance of managing emotions to promote an adequate motivational state that leads to physical activity, highlighting the importance of emotional intelligence in the practice of various physical activities of young people[8]. There is also the study conducted by Arianas et al, (2022), with the aim of studying the interaction of serotonin and emotional intelligence, the sample under study was made up of 224 schoolchildren from the city of Peloponnese (Greece), whose ages ranged from 11 to 19 years, of this group 26.3% suffered from SCH, among its main results was that children and adolescents with SCH had scores lower than 0.05, both in emotional intelligence ($p < 0.001$), in EQ well-being ($p < 0.025$), a self-control score ($p < 0.029$), in EQ emotionality ($p < 0.029$); it is concluded that children and adolescents with SCH obtained lower EI scores and lower serotonin concentrations compared to other contemporary and healthy children[9]. In the research carried out in Spain by Jiménez et al. (2020), it was sought to correct the absence of instruments designed specifically to measure emotional intelligence (EI), in children, the instrument used was called EMOCINE, it is an instrument developed, considering the main factors of Mayer and Salovey, on perception and emotional understanding, the estimated sample for the study was 776 children, Of which 48.5% are girls and 51.5% boys, the evaluation was carried out through a relationship with the academic performance of the schoolchildren, it is



concluded that the scores of the girls, in perception and emotional understanding, were consistently higher than that of the boys[10]. (Dobrin, 2020), conducted research in Russia, with the purpose of identifying the mood characteristics of first grade children with different levels of emotional intelligence, as a factor of psychological and socio-environmental adaptation in primary school children, an empirical study was developed that included the identification of the characteristics of mood through the Luscher color test, As main results it was evidenced that the increase of emotional stress, associated with the first school leads to an increase of the ergotropic tendencies in the self-regulation of the autonomic balance, generating as a result tensions in the mechanisms of adaptations, it is concluded that the capacities of the children for the recognition, evaluation and management of the emotions depend on themselves[11]. In the research carried out in Peru by Gutiérrez et al. (2023), the main objective was to determine the relationship between critical thinking and metacognition of university students in times of pandemic, the sample was made up of 135 university students, the methodology used was basic, of explanatory descriptive level and with a correlational design. The results were that there is a direct and significant relationship of $r = .729$ between the study variables, concluding that critical thinking is of great importance to promote quality, transformative and reflective education[12]. In the study carried out by Mejía (2023), its main purpose was to establish the relationship between emotional intelligence, executive functioning and academic performance of schoolchildren, the design used was descriptive correlational, the mean age of the students was 11.03 years, the data collection instruments used was the multiple intelligences questionnaire for primary, executive functioning was assessed with the CUMANES executive function test and for academic performance the average grades of the subjects were used, as main results were observed high average levels of emotional intelligence, medium low level of EF and an academic performance of basic level in mathematics and high in language and literature, It was concluded that there are relationships between emotional intelligence and executive functions, as well as between executive functions and academic performance[13]. In the study carried out by Domínguez et al. (2022), with

the aim of knowing the level of emotional intelligence in the adolescent period and analyzing the existence of significant differences that may occur in perception, understanding and emotional regulation depending on personal and school factors, the study sample was made up of 4 467 students of the secondary level, With ages between 12 and 16 years, as results obtained it has been possible to appreciate moderate levels of emotional intelligence, in addition to the presence of greater emotional regulation than understanding, in terms of gender, it is women who presented higher levels of emotional perception than men. It is concluded that emotional intelligence is mediated by the school and personal factors of adolescents, which should be useful for teachers in order to take actions or strategies to incorporate them into schools[14]. In the study carried out by Maúrtua and Anaya (2020), the main objective was to determine how and to what extent emotional intelligence is related to the aggressive behavior of schoolchildren at the secondary level, it was counted with a sample of 120 schoolchildren, the information collection technique used was the emotional intelligence test and the aggressiveness questionnaire validated by the Institute of Mental Health of Peru, As results it was had that 100% of the schoolchildren presented aggressive behaviors, 28.8% of the students presented levels of average emotional intelligence, it is concluded that the components of emotional intelligence are significantly related to aggressive behaviors ($r = 0.847$), as emotional intelligence decreases, aggressive behaviors increase in students[15]. In a study conducted in Chile, Navarro et al. (2022), raised as main objective to compare the level of self-perception of emotional intelligence of schoolchildren from three communes of the province of Concepción-Chile, the study sample was made up of 480 students, as a result it was possible to determine significant differences between students, with and without high capacity, In addition to differences in the type of educational establishment, it is concluded that, although there are no statistically significant differences, it is important to generate spaces that contribute to the development of students' potential[16]. In Spain, Llorent et al., (2022), conducted a study with the objective of describing ethnic-cultural diversity, emotional intelligence and socio-emotional competences in secondary education in Andalusia



(Spain), the sample was made up of 2 139 students, the instrument used was the Trait Meta-Mood scale (TMMS), and the questionnaire of social and emotional competencies (SEC-Q). As a result, there is a greater presence of immigrants in schools in Almeria, on the other hand, emotional intelligence does not present significant differences in ethnic-cultural groups, although there are significant differences in terms of the socio-emotional competences of students[17]. In the research carried out by Usán et al., (2019), which aimed to analyze the relationship between emotional intelligence, burnout and academic engagement in a sample of students made up of 1756 members, who belonged to 12 compulsory secondary educational institutions (ESO), the methodology used was ex post-facto of a prospective nature and with a simple descriptive design. The results obtained show that there are positive relationships between the dimensions of emotional intelligence and academic engagement, and a negative relationship between burnout and the two variables mentioned above, it is concluded that it is important to promote adaptive behaviors and emotional skills that improve academic life and school performance of students[18]. In Ecuador, an investigation was carried out with the objective of determining the relationship between emotional intelligence and the academic performance of university students, the methodological approach used was quantitative, cross-sectional, non-experimental and causal correlational level, the study sample was made up of 100 intentionally selected students, the data collection technique used was the survey and its instrument the questionnaire. It was concluded that there is a direct and significant relationship between the study variables, this being proportional between the study variables[19]. In the research carried out in Mexico on the analysis of the relationship between emotional intelligence and academic performance of students at the primary level, a study of quantitative approach, non-experimental design, cross-sectional was used, as a data measurement instrument the TMMS-24 was used, for emotional intelligence and the final grade of the school year between the years 2013-2014. The study sample consisted of 58 participants of the fifth and sixth grade, respectively, it is concluded that there is a significant relationship between the study variables

and that a correct management of emotions is essential for good student performance in schools[20].

The study questions that are intended to be answered and the proposed objectives of the study are the following: What type and degree of relationship exists between emotional intelligence and critical thinking of students at the secondary level of an Experimental Educational Center of Trujillo?, the specific problems that arise are the following: What type and level of relationship exists between emotional self-awareness and critical thinking of students at the secondary level? of an Experimental Educational Center of Trujillo?, What type and level of relationship exists between emotional self-regulation and critical thinking of students of the secondary level of an Experimental Educational Center of Trujillo?, What type and level of relationship exists between the motivation and critical thinking of students of the secondary level of an Experimental Educational Center of Trujillo?, What type and level of relationship exists between empathy and critical thinking of students of the secondary level of an Experimental Educational Center of Trujillo?, and What type and level of relationship exists between social competence and critical thinking of students of the secondary level of an Experimental Educational Center of Trujillo?.

The main objective of the research was: To establish and analyze the type and degree of relationship that exists between emotional intelligence and the development of critical thinking of students of the secondary level of an Experimental Educational Center of Trujillo; The specific objectives were: To establish and analyze the type and degree of relationship that exists between emotional self-awareness and critical thinking of students of the secondary level of an Experimental Educational Center of Trujillo, to establish and analyze the type and degree of relationship that exists between emotional self-regulation and critical thinking of students of the secondary level of an Experimental Educational Center of Trujillo, establish and analyze the type and degree of relationship that exists between self-motivation and critical thinking of students of the secondary level of an Experimental Educational Center of Trujillo, establish and analyze the type and degree of relationship that exists between empathy and critical thinking of students of the secondary level of an Experimental Educational



Center of Trujillo and establish and analyze the type and degree of relationship that exists between the social competence and critical thinking of the students of the secondary level of an Experimental Educational Center of Trujillo.

Frame of reference.

Emotional intelligence.

Emotional intelligence is defined as the ability of people to manage or regulate their emotions in a timely and effective manner[7]. For Goleman (1998), cited in Huamantupa (2023), he refers that emotional intelligence is aimed at the virtue of people to be able to identify their own feelings and those of other people, in order to stimulate themselves and way their emotions in the face of various problematic situations that arise daily[21]. Emotional intelligence is a key factor that affects the social and mental well-being of students, which allows them to understand their environment and make the right decisions in the face of various conflict situations or problems that arise daily[22]. On the other hand, for Tejido (2010), emotional intelligence is a state of mind that generates an organically programmed activity and with it a series of internal and external behaviors occur, establishing a mixture between social, psychological and physiological factors in various situations[23].

For Bisquerra (2014), it is defined as a state of excitement of the organism that predisposes the person to respond, in a systematic way, to an external or internal event that activates the emotional centers[24]. All these definitions have their starting point in the theory of the generation of emotions in human life and the way in which each of this predisposes us to action in a specific way, which is molded throughout life[25].

Emotional intelligence is considered as a construct that allows people not only to understand, but also to understand how they can influence their emotions adaptively and intelligently, as well as the interpretation of the emotional states of other people. In the psychological aspect, emotional intelligence has a fundamental role, both in the way of socializing with others, and in the adaptation strategies that are used in the environment that surrounds us.

The importance of emotional intelligence in the educational field lies in getting to introduce the call of

the education of emotions, which is also called emotional education or socio-emotional education, this educational movement reflects the great concern that all teachers must be able to change the educational problems that do not allow students to face the challenges of society. The proper management of emotions allows students to adapt to the environment in which they find themselves, performing satisfactorily in socialization with other individuals.

Critical thinking.

Critical thinking has a main characteristic that is the development of communicative skills, especially for reading-writing, because it helps to detect damages and misunderstandings in communication with a view to cognitive growth, making it one of the best mental habits[26]. For Ennis (1996), cited in Uribe and Gutiérrez (2023), critical thinking is a type of reasonable and reflective thinking, which focuses on the decision about what to do and believe, all within the framework of the dispositions and skills that are possessed. [27]. Creative critical thinking has characteristics that are associated with skills and abilities that are significant as the person energizes them with their developmental environment[28]. Critical thinking is the ability that people pose for analysis, evaluation, interpretation, making inferences, analysis, evaluation to be able to explain the meanings, to understand and observe the reality that surrounds us. For Prieto-Galindo (2020), critical thinking skills can be carried in any scenario or educational environment, related to learning involuntarily or voluntarily, so this type of thinking guides understanding, problem solving and analysis, so it is necessary to have a series of habits, in order to generate significant changes in human learning[29].

The importance of critical thinking in education is broad, being the most important in the development of academic content, being able to develop student skills and development of cognitive content in the various subjects, in addition to the aforementioned critical thinking in education, allows students to develop the capacity for reflection in their educational work.

3. Contribution Statement/Methods

The methodology selected for this study corresponds to a quantitative approach, which is based on numerical



measurement, the formulation of hypotheses or conjectures and the use of statistics, both descriptive and inferential, the type of research according to its purpose is basic, these studies have no practical purpose, that is, it does not seek to generate a change in the phenomenon of study, affirming then that there is no practical purpose, the level of research selected is the simple descriptive, since it seeks to estimate, generalize the study variables (descriptive), and establish a degree of relationship between the proposed variables; Non-experimental designs are those studies in which the study variables are not deliberately manipulated, but the phenomena are observed in their natural state, in order to understand and describe it; Finally, cross-sectional studies correspond to those in which information is collected at a single time, meaning that the participation of the analysis units will be carried out at a single time.

The study population was made up of 114 students of the third grade of secondary education of the Experimental Educational Institution "Rafael Narváez Cadenillas", of the province of Trujillo, the study sample was selected by non-probabilistic procedures and for convenience for the study, since said sample was made up of students of sections C and D, respectively, who, in the opinion and reference provided by teachers and administrators, have been presenting difficulties in managing their emotions.

The information collection technique used was the survey and the questionnaire was used as an instrument, which, due to its versatility and ease of use, can be applied to a relatively large study sample, the questionnaire used was the emotional intelligence questionnaire that consisted of 25 items, distributed in the five dimensions such as emotional self-awareness (5), emotional self-regulation (5), self-motivation (5), empathy and social competence (5); for the second variable, a questionnaire on critical thinking was used, which had a total of 30 items, distributed in the six dimensions such as: Analysis (5), interpretation (5), inference (5), assessment (5), explanation (5) and self-regulation (5). These instruments, which were previously subjected to validity by Delphi judgment and reliability through a pilot test, obtained values of Cronbach's Alpha = 0.860, for emotional intelligence and 0.85, for critical thinking, which indicated they are highly reliable. The statistical processing was carried out through the statistical package SPSS version 27 and

the Excel software, for the elaboration of the academic tables, normality test and hypothesis test.

4. Results

Table 1 shows the characterization variables of students in the third grade of secondary education of an Experimental Educational Institution in the city of Trujillo, where 2.17% correspond to 13-year-old schoolchildren, 69.57% to 14-year-olds and 28.26% to 15-year-olds; In terms of sex, 50% of the participants are men and the other 50% are women.

Table 1. Characterization variables of the study sample.

Category	Frequency	Percentage
Age		
13 years	1	2,17
14 years	32	69,57
15 years	13	28,26
Sex		
Male	23	50,00
Female	23	50,00

Table 2 presents the results achieved in the normality test where in the dimensions self-motivation, empathy and social competence of emotional intelligence have been obtained p-value lower than the level of significance, so it is determined that the data have an asymmetric distribution, with this, there is the corresponding statistical evidence to affirm that the data do not have a normal distribution, therefore, it is necessary to make use of Spearman's Rho correlation coefficient, for the testing of hypotheses.

Table 2. Normality test of the study variables.

	Shapiro-Wilk		
	Statistical	GI	Gis.
Awareness	,962	46	,137
Self-regulation	,981	46	,664
Self-motivation	,940	46	,019
Empathy	,950	46	,048



	Shapiro-Wilk		
	Statistical	GI	Gis.
Social competence	,945	46	,031
Emotional intelligence	,959	46	,104
Analysis	,974	46	,381
Interpretation	,972	46	,322
Inference	,981	46	,658
Assessment	,976	46	,455
Explanation	,963	46	,153
Self-regulation	,965	46	,178
Critical thinking	,981	46	,654

*. This is a lower limit of true significance. to. Lilliefors significance correction

Table 3 presents the results of emotional intelligence, where 8.7% of students consider that they have low levels of emotional intelligence, 51.17% consider that this variable is of regular level and 39.13% consider it good.

Table 3. Emotional Intelligence Results

Level	Frequency	Percentage
Very low	0	0,00
Low	4	8,70
Regular	24	51,17
Well	18	39,13
Total	46	100,00

Table 4 presents the results obtained in each of the dimensions of emotional intelligence where 43.48% consider it as regular and 39.13% good, in the emotional self-regulation dimension, 23.91% report that it is of low level, while 52.17% indicated that it is of regular level, in the self-motivation dimension, 36.96% indicated that it is of good level and 52.17% refer that it is of regular level, in the empathy dimension, 39.13% of the participants have qualified it as good and 45.65% regular; Finally, 43.48% indicated that social competence is of a good level and 47.48% qualified it as fair.

Table 4. Results of the dimensions of emotional intelligence.

Dimension	Level	Frequency	Percentage
Emotional self-awareness	Very low	1	2,17
	Low	6	13,04
	Regular	20	43,48
	Well	19	41,30
Emotional self-regulation	Very low	0	0,00
	Low	11	23,91
	Regular	24	52,17
	Well	11	23,91
Self-motivation	Very low	1	2,17
	Low	4	8,70
	Regular	24	52,17
	Well	17	36,96
Empathy	Very low	0	0,00
	Low	7	15,22
	Regular	21	45,65
	Well	18	39,13
Social competence	Very low	0	0,00
	Low	4	8,70
	Regular	22	47,48
	Well	20	43,48

Table 5 shows the results obtained in the critical thinking variable, where 56.52% of students have categorized it as fair, 19.57% report that it is good and 21.74% rate it as low.

Table 5. Results of critical thinking.

Level	Frequency	Percentage
Very low	1	2,17
Low	10	21,74
Regular	26	56,52
Well	9	19,57
Total	46	100,00



Table 6 presents the results obtained in each of the dimensions of critical thinking, where in the analysis dimension 26.09% of the students indicated that it is of low level and 54.35% indicated that it is of regular level, in the interpretation dimension, 23.91% indicated that it is of low level and 50% qualified it as regular. In the dimension inference 31 30.43% of the participants indicated that it is of low level and 50% rated it as regular, in the dimension assessment 23.91% of the students rated it as good and 43.48% as fair, in the dimension explanation 26.09% have reported that it is of low level, while 47.83% indicated that it is of regular level; Finally, 34.78% of students rate the self-regulation dimension as good, while 41.30% indicated that it is of regular level.

Table 6. Results of the dimensions of critical thinking.

Dimension	Level	Frequency	Percentage
Analysis	Very low	2	4,35
	Low	12	26,09
	Regular	25	54,35
	Well	7	15,22
Interpretation	Very low	2	4,35
	Low	11	23,91
	Regular	23	50,00
	Well	10	21,74
Inference	Very low	2	4,35
	Low	14	30,43
	Regular	23	50,00
	Well	7	15,22
Assessment	Very low	3	6,52
	Low	12	26,09
	Regular	20	43,48
	Well	11	23,91
Explanation	Very low	2	4,35
	Low	12	26,09
	Regular	22	47,83
	Well	10	21,74
Self-regulation	Very low	1	2,17
	Low	10	21,74
	Regular	19	41,30
	Well	16	34,78

Table 7 presents the results of the hypothesis test, both at a general and specific level, in the general hypothesis an $r_s = 0.999$ and a $p\text{-value} = 0.000$ were obtained, so the alternative hypothesis is accepted and the null hypothesis is rejected, with this it is demonstrated that there is a positive and very high relationship between the study variables; In the specific hypothesis 1, an $RS = 0.995$ and a $P\text{-value} = 0.000$ have been obtained, in the specific hypothesis 2, an $RS = 0.994$ and a $P\text{-value} = 0.000$ were obtained, in the specific hypothesis 3, $RS = 0.994$ and a $P\text{-value} = 0.000$ have been obtained, in the specific hypothesis 4, an $RS = 0.994$ and a $P\text{-value} = 0.000$ were obtained, Finally, in the specific hypothesis 5, an $RS = 0.996$ and a $P\text{-value} = 0.000$ were reached, in all these cases, there is enough statistical evidence to accept the alternative hypothesis and reject the hypothesis of the researchers.

Table 7. Hypothesis testing (general and specific).

		Critical thinking
Emotional intelligence	Correlation coefficient	,999**
	Sig. (bilateral)	,000
	N	46
Emotional self-awareness	Correlation coefficient	,995**
	Sig. (bilateral)	,000
	N	46
Emotional self-regulation	Correlation coefficient	,994**
	Sig. (bilateral)	,000
	N	46
Self-motivation	Correlation coefficient	,994**
	Sig. (bilateral)	,000
	N	46
Empathy	Correlation coefficient	,994**
	Sig. (bilateral)	,000
	N	46
Social competence	Correlation coefficient	,996**
	Sig. (bilateral)	,000
	N	46



5. Discussions

The results achieved in the study demonstrate that there is a direct and significant relationship between the study variables (Emotional intelligence and critical thinking), with an $r_s=0.999$ and a p-value of 0.000 lower equal to significance level (0.05), which indicates that there is a very high relationship, so the alternative hypothesis is accepted, and the null hypothesis is rejected. At the descriptive level, significant results were obtained both for the emotional intelligence variable, where 51.17% of students consider they have a regular level and 39.13% refer to a good level, in terms of critical thinking, 21.74% of students have reported having a low level, while 56.52% refer to regular levels and 19.57% good levels.

The results achieved in the study at the descriptive level, the results of the emotional intelligence variable correspond to the research conducted by Dobrin (2020), who sought to identify the different levels of emotional intelligence, where it was concluded that the capacities of children for the management, evaluation and recognition of their emotional intelligence depends on themselves. In Dominguez's research, it was buco to know the level of emotional intelligence in the adolescent stage, as results it was possible to evidence the presence of moderate levels of emotional intelligence, in addition to greater regulation, than understanding. At the inferential level, they correspond to the research carried out by Vaquero et al., (2022), where the relationship between motivational regulations and emotional intelligence was investigated, concluding that there are statistically positive and significant associations between the study variables. Likewise, the results correspond to those obtained in the study by Mejía (2023), which aimed to establish the relationship between emotional intelligence, executive functioning, and academic performance, concluding that there are relationships between emotional intelligences, executive functions, and academic performance. In the research carried out by Maurtua and Anya (2020), where it was sought to determine the relationship between emotional intelligence and aggressive behaviors of schoolchildren, it is concluded that there is a direct and significant relationship between the study variables, with an $r_s=0.847$; in the research carried out by Usán et al., (2019), aimed to analyze the relationship between emotional intelligence, burnout syndrome and

engagement, it was concluded that there is a direct and significant relationship between the study variables, Finally, in the study conducted by Valenzuela and Portillo (2018), on the analysis of emotional intelligence and academic performance, concluding that there is a significant relationship between the variables studied.

The results achieved are supported by the main theoretical references, who state the following: For (Luque et al, 2022), emotional intelligence is defined as the ability of people to manage or regulate their emotions, in a timely and effective manner, in addition to what has been said, Puertas et al., (2020), mentions that emotional intelligence is a key factor that affects the social and mental well-being of students, which allows you to understand your environment and make the right decisions in the face of various conflict situations or problems that arise daily. For the critical thinking variable, (Rodríguez, et al., 2022), it maintains that it has a main characteristic such as the development of communicative skills, especially reading writing, since it allows detecting prejudices and misunderstandings in communication with mitas towards cognitive growth, which makes it one of the best mental habits. For Hernández et al., (2022), creative critical thinking has several characteristics that allow it to be associated with skills and abilities that are significant.

The main limitations that were faced in the development of the research correspond to the little information available from studies related to the research variables, likewise, the little predisposition of the students to participate in the study, despite having the authorization of their parents, to participate in the research.

6. Conclusion

It has been established that there is a direct and significant relationship between intelligence and critical thinking, having obtained a $r_s = 0.999$, which indicates a very high relationship and a p-value of $0.00 \leq 0.05$, so there is enough statistical evidence to accept the hypothesis of the researchers and reject the null hypothesis.

In the specific hypotheses have been obtained $r_s = 0.995$ (emotional self-awareness and critical thinking),



and a p-value of $0.000 \leq 0.05$, so that, the alternative hypothesis is accepted, an $r_s = 0.994$ (emotional self-regulation and critical thinking) has been obtained, with a p-value of $0.000 \leq 0.05$, so the alternative hypothesis is accepted, $R_s = 0.994$ (self-motivation and critical thinking) has been obtained, with a P-value of $0.000 \leq 0.05$, so the alternative hypothesis is accepted and the null hypothesis is rejected, an $R_s = 0.994$ (empathy and critical thinking) has been obtained, with a P-value of $0.000 \leq 0.05$, so the alternative hypothesis is accepted and the null hypothesis is rejected, An $R_s = 0.996$ (social competence and critical thinking) has been obtained, with P-value of $0.000 \leq 0.05$, so the alternative hypothesis is accepted and the null hypothesis is rejected.

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