

Positive Intelligence and Critical Thinking in Students of a Private University in San Martín, Perú

Contreras-Julián Rosa Mabel¹, Delgado-Bardales José Manuel², Sánchez-Dávila Keller³, Palomino-Alvarado Gabriela del Pilar⁴

Abstract

Organizations focus on the results of their workers, measuring productivity and efficiency, but they do not ensure personal and professional growth. Furthermore, there are no scientific studies that suggest strategies for working as a team to achieve not only institutional purposes, but also happiness and success. Furthermore, the research that has been carried out on intelligence has only focused on aspects: emotional, cognitive, social, financial, spiritual, multiple intelligences, among others, but has not focused on positive intelligence. So far there is only one study on positive intelligence by Chamine, in 2013, but they still do not give it importance. This has led to carrying out this scientific research in order to manage and control thought. Therefore, the objective was to establish the relationship between positive intelligence and critical thinking in university students. The basic type, with a quantitative approach, non-experimental design with a correlational descriptive level. The population and sample were made up of 80 Master's students in Educational Psychology. As results, it was obtained that most of the dimensions of positive intelligence are at the medium level, such as Controller, hyper-achiever, hyper-rational, hyper-vigilant, accommodating, restless, rigorous, victim and judge. Regarding the dimensions of critical thinking, most are at a medium level such as certainty, logic, justice, importance and depth. It was concluded that there is a very low, but non-significant positive relationship between positive intelligence and critical thinking with a Spearman's Rho statistical coefficient of 0.151 with a p-value of 0.181.

Keywords: *Ability, Behavioral Self-Control, Positive Intelligence, Critical Thinking, Saboteur.*

Introduction

There is growing concern about the behavior and actions of employees within organizations. Consequently, research has focused on pedagogical and psychological aspects such as cognitive, affective, and social intelligence, including multiple intelligences, financial intelligence, spiritual intelligence, among others. While the advancement of science and its applicability aim to bring about fundamental changes in society to increase productivity, this has not always been reflected within organizations. Institutions have therefore been compelled to reorganize their systems, taking into account the demands of the labor market. This involves prioritizing the stimulation and strengthening of intelligences, as well as the development of competencies, skills, aptitudes, attitudes, and other attributes. The ultimate goal is to enable individuals to make better decisions, adopting analytical, critical, and creative approaches.

Although there is increasing research aimed at understanding individual behavior and actions, scientific studies on positive intelligence are notably absent. This is crucial, as individuals often fail to utilize their efforts efficiently to reach their full potential, leading to frustration. It is worth mentioning that, regarding positive intelligence, there is only one study on the topic, but it is not scientific—it originates from Chamine (2013).

Research in this area has focused on controlling the mind to ensure it works in one's favor and on developing competencies that prepare individuals to make decisions, judge, evaluate, analyze, and critique—complex skills that enable them to be more strategic, efficient, and effective. However, critical thinking is

¹ Doctor in Educational Sciences. Professor at César Vallejo University, Email: rcontrerasj@ucv.edu.pe, (Corresponding Author), ORCID: <https://orcid.org/0000-0002-0196-1351>; Scopus Author ID: 57215716159.

² Doctor in University Teaching. Professor at César Vallejo University, Email: jmdelgadob@ucvvirtual.edu.pe, ORCID: <https://orcid.org/0000-0001-6574-2759>.

³ Doctor in Public Management and Governance. Professor at César Vallejo University, Email: ssanchezda2081@ucvvirtual.edu.pe, ORCID: <https://orcid.org/0000-0003-3911-3806>.

⁴ Doctor in University Management. Professor at César Vallejo University, Email: dpalominoal@ucvvirtual.edu.pe; ORCID: <https://orcid.org/0000-0002-2126-2769>.

currently weakened, exhibiting deficits at various levels. Firstly, there are no studies demonstrating the behavior, influences, or relationships between critical thinking and other variables under investigation. Secondly, cognitive skills have not been sufficiently strengthened in the classroom, where discernment between good and bad or true and false influences human actions. People are often driven by power or the ambition for wealth.

On the other hand, positive experiences and individual positive traits could contribute to a better quality of life. To achieve this, it is essential to regulate and control internal "saboteurs." The mind, acting as a silent accomplice, can guide daily actions with wisdom, affecting personal, professional, and family life, potentially leading to success or failure. This dynamic not only affects individuals but also impacts workplaces and families, becoming a limitation to economic growth and development in the province.

In universities, efforts to control the mind and overcome saboteurs have not been implemented, largely due to a lack of knowledge about positive intelligence. The absence of scientific research on this subject reflects a lack of organizational concern for contributing to greater happiness and success among their personnel, something students should also demonstrate (Ramón, n.d.). Although Chamine published his book on positive intelligence in 2013, the topic has not received sufficient attention. Very few educators, educational psychologists, or psychologists have delved into the study of harnessing the power of thoughts. However, it is essential to investigate this subject to prevent errors caused by internal saboteurs, as they hinder organizational growth, interpersonal relationships, and the management carried out by coordinators, heads, and academic and administrative leaders. Addressing these challenges is crucial for fostering critical thinking, particularly in meeting intellectual standards that help individuals think more effectively.

Theoretical Framework

This study is based on research in various fields, particularly critical thinking, as no thesis or scientific article on positive intelligence has been found. In this regard, Milla (2012) concluded that the level of critical thinking observed was low. Machuca (2018) stated that one of the obstacles to achieving critical thinking is that students do not like to read. He also pointed out that the lack of activities involving gradual comprehension, from simple to complex, limits the development of critical capacity. Workshops and applied activities did not develop intellectual standards such as accuracy, fairness, and relevance.

In the case of Steffens et al. (2017), they concluded that students at the Universidad de la Costa (CUC) demonstrated a high level of criticality, while no improvements were observed at the Universidad del Atlántico. This is strongly related to reading habits. A student who does not read or research will not strengthen critical thinking, which serves as the foundation for all dimensions of human development, enabling discernment of facts and situations.

Mackay et al. (2018) stated that the logical dimension, based on abstract and critical thinking, allows individuals to gain greater knowledge and better precision in decision-making. Additionally, in terms of reasoning ability, order, and clarity, the mind's power is enhanced. They also noted that practicing logic increases the researcher's analysis, which enables them to be selective with their information. It helps researchers become more curious and demonstrate greater interest in achieving their goals, showing increased precision in problem-solving. Similarly, Elizalde et al. (2022) concluded in their scientific research that critical thinking is a set of aspects that should be developed throughout a student's academic journey. Unfortunately, this is not strengthened during the school years, which leads to fundamental capacity gaps when students reach university. According to Salazar (2020), there is a significant, positive, direct linear relationship between critical thinking and academic performance, with a Spearman's Rho of 0.735.

Emotional intelligence is considered the degree of control a person is able to exert over their own mind, as well as how much their mind works in their own favor; that is, the percentage of time our mind works for or against us. When the positive intelligence quotient increases, it boosts the inner sage and keeps the saboteurs at bay (Chamine, 2013). This is the first major step to improving overall performance, but it doesn't just focus on enhancing performance—it also concerns the happiness of teams and individuals themselves (Ramón, n.d.). Therefore, individuals and teams often sabotage themselves subtly by getting

trapped in repetitive actions. Since they don't try different approaches, they fail to explore their full potential. Their brains are in constant conflict between their saboteurs and their internal sage, two opposing forces.

The ten saboteurs of positive intelligence, according to Chamine (2013), are:

- a) **Avoiders:** They focus on seeing the positive side of things to avoid pain and sadness. They wish to be pacifists in any conflict, suppressing anger and rage by thinking of things that make them happy.
- b) **Controllers:** They focus on the competencies of others, trying to push them to achieve everything they set out to do. Their persistence is so intense that it makes others nervous.
- c) **Hyper-Achievers:** They are competitive and goal-oriented, avoiding their emotions to prevent them from working against them. Their self-satisfaction is fleeting.
- d) **Hyper-Rationals:** They are highly analytical, love having control over knowledge, underestimate emotions, can display cynicism, and have limited flexibility with themselves and others.
- e) **Hyper-Vigilants:** They are sensitive to the dangers they face, get tired quickly, and therefore isolate themselves from others. They are anxious and distrustful.
- f) **Pleasers:** They are helpful and like to be involved in social groups, but quickly feel resentful when not recognized, especially by those they help. They may make others feel manipulated or guilty for giving a negative response.
- g) **Restless:** They are constantly busy with different things, and when things are new and don't go as planned, they become frustrated. Sometimes, they believe life is short and therefore dislike long-lasting relationships.
- h) **Sticklers:** They criticize everyone, which causes others to reject their standards because they view them as impossible. Their thinking is either black or white, which makes them perfectionists in everything they do.
- i) **Victims:** They consider themselves victims of negative circumstances, seeking to make others feel powerless by not being able to help them with their torment. In summary, they believe they are martyrs.
- j) **Judges:** They are considered universal masters because they have power over all the other saboteurs. They are responsible for most disappointments, anger, regret, guilt, anxiety, stress, shame, etc.

Critical thinking analyzes and evaluates thoughts in order to improve them. According to Paul and Elder (2003), thinking should be restructured to achieve creativity, innovation, and increase criticality. For Rodríguez (2021), it is the guidance of thought using reason. Petress (2004) states that critical thinking requires time, energy, and dedication for decision-making. Facione (2007) describes it as sound judgment. The Red de Universidades Anáhuac (2021) defines it as the ability to analyze the information we receive. Gil et al. (2016) describe it as the ability to question reality and understand that there is a relative truth. Castellero (2017) defines it as the ability to analyze and evaluate existing information on a particular subject.

It can be said that evaluating thought is a process where individuals identify thoughts that have intellectual strengths and potential weaknesses. According to Paul and Elder (2005), monitoring thought helps improve reasoning by ensuring the fulfillment of basic or universal intellectual criteria.

The capacities to strengthen critical thinking are:

- a) **Clarity:** The ability to comprehend a text, meaning knowing how to identify the main topic and subtopics. Strategies to apply for identifying the topic include highlighting, paraphrasing, and exemplifying.
- b) **Certainty:** The ability to verify the validity of information based on a deeply analytical cognitive process.
- c) **Relevance:** The ability to demonstrate mastery in identifying main ideas, differentiating them from secondary ideas, and relating relevant information to address the problem.
- d) **Logic:** The ability to apply strategies for identifying the structure of the text, developing analogies, numerical sequencing, and syllogism.
- e) **Depth:** The ability to analyze the complexity of the topic, identifying the factors that make problems difficult and the challenges in understanding the text.
- f) **Justice:** This thought process analyzes various converging and diverging viewpoints, putting aside personal positions or interests, or questioning one's perception to verify it against other opinions.
- g) **Precision:** The ability to analyze information to ensure it is accurate and highly detailed.
- h) **Breadth:** Focuses on analyzing what others think, especially opposing views, with the aim of destabilizing cognitive biases and prompting further investigation or expanding knowledge in order to reach the truth.
- i) **Importance:** Focuses on the growth and productivity a person must achieve, not only within the organization but also in their personal and family life. To do so, one must be selective in identifying the actions to be taken.

Method

This is a basic research study with a non-experimental design, as the variables were not manipulated. It is quantitative, transversal, and descriptive-correlational in nature. The population and sample consisted of 80 students from the Master's program in Educational Psychology at a private university located in the Peruvian Amazon. The technique used was a survey, and the instrument consisted of two questionnaires designed for this research. For emotional intelligence, 11 dimensions and a total of 41 items were included. For critical thinking, there were 10 dimensions and 24 items. Both instruments used an ordinal scale, Likert-type, ranging from 1 to 5 (1 = Never, 2 = Almost never, 3 = Sometimes, 4 = Almost always, 5 = Always).

The instruments were validated by experts to demonstrate their degree of validity. Three professional specialists were consulted, who evaluated the consistency and relevance of the instruments based on ten criteria: clear, objective, current, organized, sufficient, intentional, consistent, methodologically coherent, and relevant. The validation used a Likert-type scale: 1 = very poor, 2 = poor, 3 = acceptable, 4 = good, 5 = excellent. According to the evaluation, the first variable had an average score of 4.87, indicating a 97.3% agreement among the experts. For the second variable, the score was also 4.87, reflecting 97.3% agreement, which indicated high validity. Furthermore, the instruments met the methodological conditions for their applicability.

For the statistical test, Cronbach's alpha was used to measure reliability, with a result of 0.86 for the emotional intelligence instrument and 0.95 for the critical thinking instrument. Additionally, ethical principles were respected, including the right to free participation, ensuring no harm to participants, and always seeking to benefit the study subjects. The participants' freedom to withdraw from the study at any time was also respected.

Results and Discussion

Table 1. The Level of Dimensions of Positive Intelligence

Dimension	Level	Range	Total	
			N°	%
Avoider	High	15-20	46	58 %
	Medium	10-14	34	42 %
	Low	04-09	00	00 %
Controller	High	15-20	11	14 %
	Medium	10-14	52	65 %
	Low	04-09	17	21 %
Hyperachiever	High	19-25	21	26 %
	Medium	12-18	57	71 %
	Low	05-11	02	03 %
Hyperrational	High	15-20	41	51 %
	Medium	10-14	39	49 %
	Low	04-09	00	00 %
Hypervigilant	High	15-20	11	13 %
	Medium	10-14	54	68 %
	Low	04-09	15	19 %
Pleaser	High	15-20	16	20 %
	Medium	10-14	37	46 %
	Low	04-09	27	34 %
Restless	High	15-20	09	11 %
	Medium	10-14	58	73 %
	Low	04-09	13	16 %
Stickler	High	15-20	37	46 %

	Medium	10-14	42	53 %
	Low	04-09	01	01 %
Victim	High	15-20	07	08 %
	Medium	10-14	51	64 %
	Low	04-09	22	28 %
Judge	High	15-20	11	14 %
	Medium	10-14	46	58 %
	Low	04-09	23	08 %

Note: Questionnaire applied to Educational Psychology masters

In the table, the level of positive intelligence dimensions of students from the Master's in Educational Psychology at a private university in the San Martín region of Peru is observed. Regarding the "Avoider" dimension, it is found to be at a high level with 58%; this means that students tend to focus on positive experiences, especially during adversity. They avoid conflicts and unpleasant situations that may affect their emotional state, and they are concerned about others, especially the pain others are going through. They prefer peaceful experiences that bring them peace and tranquility, avoiding becoming upset.

Regarding the "Controller" dimension, it is at a medium level with 65%. This suggests that students have a balanced approach to managing their competencies, work, and challenges, both in their personal and professional lives. They tend to show occasional anxiety and impatience when faced with problems or making delicate decisions. Their insistence can sometimes make others nervous due to their anxiety and impatience. For the "Hyper-Achiever" dimension, it is at a medium level with 71%. This means that most students are not overly addicted to their work, respect their work schedules, and value their personal or family life. However, it is concerning that some students seek constant validation, which could indicate a lack of confidence in their abilities. They tend to demonstrate competitiveness to achieve their goals and meet set targets, but their self-satisfaction is fleeting.

Regarding the "Hyper-Rational" dimension, it is found to be at a high level with 51%. This suggests that there is a significant number of students who are highly analytical and always have convincing arguments for supporting their ideas. They also expect others to present well-structured arguments. This can be favorable for analyzing pros and cons when making decisions in their management. They enjoy analyzing problems from a distance, desire great knowledge through prior research, and may demonstrate a bit of cynicism. Their flexibility is limited, especially when they feel that their expectations are not being met.

The "Hyper-Vigilant" dimension is at a medium level with 68%. This means that most students are not overly vigilant of the staff they are in charge of, nor are they highly anxious or intense in difficult situations. They are not very sensitive to danger and do not suffer from exhaustion that would lead them to isolate themselves from others. Regarding the "Pleaser" dimension, it is at a medium level with 46%. These results are favorable, as the workers are not overly obliging. While they do like to help others, they crave acceptance, encouragement, and frequent recognition to feel at ease. Additionally, they can occasionally become offended easily when they feel unappreciated or unrecognized, often manipulating people in their close circle to make them feel guilty about what is happening to them. For the "Restless" dimension, it is at a medium level with 73%. This suggests that very few students are so restless and impatient that they experience anxiety. They cannot stay idle and constantly seek to stay occupied with different activities. If they do not, they become easily frustrated. The valuation is not very high, nor is their self-esteem particularly low, and they are not very resistant to long-lasting relationships. Regarding the "Stickler" dimension, it is at a medium level with 53%. This indicates that many students like to be perfectionists in their critiques of coworkers and even their own work. They prefer to be organized in their lives and are often radical in their decision-making. Their perfectionism and demand for high standards can sometimes lead them to think that others are lazy because they do not perform tasks properly.

For the "Victim" dimension, it is at a medium level with 64%. This suggests that students do not see themselves as martyrs in their work. They do not seek pity or sympathy; they carry their grief internally and

demonstrate strength to others. They also do not focus much on negative experiences they have had. Regarding the "Judge" dimension, it is at a medium level with 58%. This means that they do not focus much on negative thoughts, disappointments, or regrets about their decisions. They tend to discern when they are or are not the cause of the problems that upset them. They do not feel much shame or anxiety about the unfavorable experiences they have gone through.**

Table 2. The Level of Critical Thinking Dimensions

Dimension	Level	Range	Total	
			N°	%
Clarity	High	15-20	52	65 %
	Medium	10-14	28	35 %
	Low	04-09	00	00 %
Certainty	High	09-10	16	20 %
	Medium	06-08	60	75 %
	Low	02-05	04	05 %
Relevance	High	12-15	45	56 %
	Medium	07-11	35	44 %
	Low	03-06	00	00 %
Logic	High	15-20	40	50 %
	Medium	10-14	40	50 %
	Low	04-09	00	00 %
Justice	High	09-10	07	09 %
	Medium	06-08	68	85 %
	Low	02-05	05	06 %
Precision	High	15-20	53	66 %
	Medium	10-14	27	34 %
	Low	04-09	00	00 %
Depth	High	09-10	10	13 %
	Medium	06-08	64	80 %
	Low	02-05	06	07 %
Amplitude	High	09-10	09	21 %
	Medium	06-08	69	39 %
	Low	02-05	02	40 %
Importance	High	09-10	29	36 %
	Medium	06-08	51	64 %
	Low	02-05	00	00 %

Note: Questionnaire applied to Educational Psychology masters

Regarding the level of critical thinking dimensions of students in the Master's program in Educational Psychology at a private university in the San Martín region of Peru, it was found that: Regarding clarity, the predominant level is high with 65%, meaning that the ability to comprehend reading is strengthened in most of the students in the program. They find it easy to identify the main and subtopics and are able to paraphrase better. In this regard, Mackay et al. (2018) concluded that order and clarity contribute to improving critical thinking. Regarding certainty, the level is medium at 65%, indicating that it is necessary to work more on the ability to verify the validity of information and demonstrate better analytical judgment of texts or ideas with solid arguments. Strengthening this ability is crucial, as it is key to human development in any personal or professional context.

For relevance, it is high at 56%, which means that this capacity is stronger than the previous one, as most of the students easily identify the main ideas, the analogical relationship between ideas in a text, between paragraphs, as well as the main topic and subtopics. These results are encouraging because one must have the ability to discern between what is primary and secondary, what is good and bad, what is urgent versus

what is important, etc. Regarding logic, it is 50% for both medium and high levels, indicating an intermediate average. This suggests that students have an average proficiency in mastering the structure of a text, differentiating types of texts, their parts, and characteristics, as well as understanding logical sequencing in the writing of information. This implies that the surveyed professionals are skilled with language, and the texts they work with are coherent, maintaining logical sequencing between sentences, paragraphs, or chapters. Furthermore, it is important to note that any professional applies this capacity in their work. Mackay et al. (2018) concluded that logic helps individuals gain greater knowledge, making their decision-making process more precise.

Regarding justice, the level is medium at 85%. This suggests that there is a need to improve the capacity to assess students' thinking in order to demonstrate objectivity and impartiality, even when the evaluator is the same person, meaning minimizing favoritism toward their own perspective. Therefore, students do not demonstrate a clear criterion for evaluating or perceiving different positions with the same rigor and demands. For precision, the level is high at 64%, meaning that most students demonstrate the ability to identify the details the author presents regarding their point of view. The information they provide is more precise, accurate, and detailed. Regarding depth, it is at a medium level with 80%, indicating that most students do not have a good understanding of the complexity of the topic and do not enjoy researching or discovering the causes or origins of things.

For breadth, the level is low at 40%, meaning that the ability to expand on information is not evident. They also do not like to project themselves with new perspectives. In terms of importance, it is at a medium level with 64%, suggesting that most students do not focus much on what is most important. This could reflect time management issues, such as the inability to classify things as important or unimportant, urgent or non-urgent, leading to work stress. It could also indicate a risk of failing to address important information in a timely manner. Mackay et al. (2018) concluded that analytical capacity is vital for segmenting relevant and useful information for study.

Regarding studies on positive intelligence dimensions, no specific research has been done. However, Vaidya et al. (2023) in their study on remote work indicated that such activities can increase stress and burnout, which could negatively impact employee performance. This highlights the importance of applying positive intelligence to ensure that the saboteurs work in one's favor to avoid negative attitudes caused by pressure.

Table 3. Correlation Between the Dimensions of Positive Intelligence and Critical Thinking

			Critical thinking
Spearman's Rho	Avoider	Correlation coefficient	,281*
		Sig. (bilateral)	,011
		N	80
	Controller	Correlation coefficient	-,129
		Sig. (bilateral)	,255
		N	80
	Hyperachiever	Correlation coefficient	,218
		Sig. (bilateral)	,052
		N	80
	Hyperrational	Correlation coefficient	,130
		Sig. (bilateral)	,249
		N	80
	Hypervigilant	Correlation coefficient	-,073
		Sig. (bilateral)	,520
		N	80
	Pleaser	Correlation coefficient	,144
		Sig. (bilateral)	,203
		N	80
	Restless	Correlation coefficient	,115
Sig. (bilateral)		,310	
N		80	
Stickler	Correlation coefficient	,204	
	Sig. (bilateral)	,069	
	N	80	
Victim	Correlation coefficient	,146	
	Sig. (bilateral)	,195	
	N	80	
Judge	Correlation coefficient	,040	
	Sig. (bilateral)	,725	
	N	80	
Critical thinking		Correlation coefficient	1,000
		Sig. (bilateral)	.
		N	80

Note. Results processed in SPSSv25

There is a positive and significant relationship, thus the null hypothesis is rejected and the alternative hypothesis is accepted, establishing that there is a low but significant positive correlation between the "Avoider" dimension and the critical thinking of the students in the Master's in Educational Psychology at a private university in the San Martín region, Peru; this also has a feasibility of 7.89%. There is a negative but not significant relationship, therefore, the alternative hypothesis is rejected and the null hypothesis is accepted, concluding that there is a very low but not significant negative correlation between the "Controller" dimension and critical thinking; it also has a feasibility of 1.66%. There is a non-significant positive relationship, therefore, the alternative hypothesis is rejected and the null hypothesis is accepted, admitting that there is a low but not significant positive correlation between the "Hyper-Achiever" dimension and the critical thinking of the students; this also has a feasibility of 4.75%. According to the

results, there is a positive but not significant relationship, therefore, the alternative hypothesis is rejected and the null hypothesis is accepted. In the context of the research, it is concluded that there is a very low, non-significant positive correlation between the "Hyper-Rational" dimension and critical thinking; this also has a feasibility of 1.66%.

The results indicate a negative, non-significant relationship, therefore, the alternative hypothesis is rejected and the null hypothesis is accepted. Thus, there is a very low negative, but not significant, correlation between the "Hyper-Vigilant" dimension and the critical thinking of the students; this also has a feasibility of 0.53%. The results also indicate a positive but not significant relationship, therefore, the alternative hypothesis is rejected and the null hypothesis is accepted. In the context of the research, there is a very low, non-significant positive correlation between the "Pleaser" dimension and critical thinking; this also has a feasibility of 2%. The results indicate a positive but not significant relationship, therefore, the alternative hypothesis is rejected and the null hypothesis is accepted. In the context of the research, there is a very low positive but non-significant correlation between the "Restless" dimension and critical thinking; this also has a feasibility of 1.32%. Similarly, it is stated that there is a positive but not significant relationship, therefore, the alternative hypothesis is rejected and the null hypothesis is accepted, concluding that there is a low, non-significant positive correlation between the "Stickler" dimension and critical thinking; this also has a feasibility of 1.41%. The results also indicate a positive but not significant relationship, therefore, the alternative hypothesis is rejected and the null hypothesis is accepted. In the context of the research, there is a very low, non-significant positive correlation between the "Victim" dimension and critical thinking; this also has a feasibility of 2.13%. Finally, the results indicate a positive but not significant relationship, therefore, the alternative hypothesis is rejected and the null hypothesis is accepted. That is, there is a very low positive but not significant correlation between the "Judge" dimension and critical thinking; this also has a feasibility of 0.16%.

Studies at the dimension level have not been conducted, but research at the variable level has been carried out, such as the work by Khairiah et al. (2023), who highlighted the importance of critical thinking in individuals and how it can be influenced by the media, social networks, or technological devices in order to achieve effective communication.

Table 4. Correlation Between the Dimensions of Positive Intelligence and Critical Thinking

		<i>Critical thinking</i>	
Spearman's Rho	Positive Intelligence	Correlation coefficient	,151
		Sig. (bilateral)	,181
		N	80

Note. Results processed in SPSSv25

According to the results in the table, Spearman's correlation coefficient (ρ) is 0.151 with a p-value of 0.181, indicating that there is a positive relationship, but it is not significant; Therefore, the p-value (two-sided) obtained is above the required 0.05 ($p < 5\%$ for a 95% confidence level), therefore, the alternative hypothesis is rejected and the null hypothesis is admitted. So, within the framework of the research, there is a very low positive correlation, but it is not significant between positive intelligence and critical thinking of university students; It also has a viability of 2.28%. In this regard, as positive intelligence is a new topic for which no scientific research was found, it has not been possible to see its relationship with other variables, something that has not happened with critical thinking, since Salazar (2020) demonstrated the existence of a high and significant direct positive linear relationship between critical thinking and academic performance with a Spearman's Rho of 0.735; but the study was carried out with academic performance that has not been touched upon on this occasion.

Conclusions

There is a very low positive but not significant relationship between positive intelligence and critical thinking in students from the Master's in Educational Psychology at a private university in the San Martín region, Peru, with a Spearman's Rho coefficient of 0.151 and a p-value of 0.181; furthermore, only 2.28% of critical thinking is viable within positive intelligence, with the difference attributed to other factors such as character, temperament, emotional intelligence, multiple intelligences, etc. It is assumed that the variables are independent.

The level of the dimensions of positive intelligence is as follows: Avoider: High level at 58%. Controller: Medium level at 65%. Hyper-Achiever: Medium level at 71%. Hyper-Rational: High level at 51%. Hyper-Vigilant: Medium level at 68%. Pleaser: Medium level at 46%, followed by low at 34% and high at 20%. Restless: Medium level at 73%. Stickler: Medium level at 53%. Victim: Medium level at 64%. Judge: Medium level at 58%. Most dimensions exceed 50%, which is favorable, although reinforcing the conditions for university students is necessary.

The level of the dimensions of critical thinking is as follows: Clarity: High level at 65%. Certainty: Medium level at 65%. Relevance: High level at 56%. Logic: 50%. Justice: Medium level at 85%. Precision: High level at 64%. Depth: Medium level at 80%. Breadth: Low level at 40%. Importance: Medium level at 64%. Most dimensions are also favorable, exceeding 50%, but the conditions of students must be reinforced to generate more analysis and interpretation of facts.

There is a significant low positive relationship between the "Avoider" dimension and critical thinking with a Spearman's Rho of 0.281 and a p-value of 0.011. Additionally, it has a variability of 7.89%. There is a non-significant low positive relationship between the "Achiever", "Stickler" dimensions and critical thinking with Spearman's Rho of 0.218 and 0.204 and p-values of 0.052 and 0.069, respectively. These have a variability of 4.75% and 1.41%. There is a very low non-significant positive relationship between the "Hyper-Rational", "Pleaser", "Restless", "Victim", and "Judge" dimensions and critical thinking with Spearman's Rho of 0.130, 0.144, 0.115, 0.146, 0.040 and p-values of 0.249, 0.203, 0.310, 0.203, 0.725, respectively. The variability between critical thinking and the dimensions is 1.66%, 2%, 1.32%, 2.13%, and 0.16%, respectively. There is a very low non-significant negative relationship between the "Controller" and "Hyper-Vigilant" dimensions and critical thinking with Spearman's Rho of -0.129, -0.073, and p-values of 0.255, 0.520. The variability between these variables is 1.66% and 0.53%, respectively. The variables are assumed to be independent in their dimensions in this scenario.

In conclusion, almost all the correlational hypotheses have been low or very low positive but not significant. These results could be due to different factors: the size of the population, as only 80 students were used; the sample characteristics, as they were all Master's students, most of whom are workers but few have staff under their responsibility. Positive intelligence seems to be more applicable to those with responsibility for personnel within an organization.

The limitations found in this study include: the mode of application of the instruments and research, as they were conducted virtually. While virtuality is faster, not everyone is willing to respond within the given time, and some may refuse to answer. Another limitation is the lack of research on positive intelligence, as no theses or scientific articles have been conducted in this field. Therefore, the results of this study cannot be compared with those of other authors. As for the second variable, although critical thinking is a well-studied topic, its correlations could not be fully utilized in this work, as one of the variables is different, and the levels of the dimensions of each variable were not found. It is recommended that researchers interested in studying positive intelligence focus on professionals who have staff under their responsibility and increase the total population and sample size. Additionally, research instruments should be applied in person.

References

- National Council of Science, Technology and Innovation (2018). Regulations for the qualification, classification and registration of researchers in the national system of science, technology and technological innovation - Renacyt Regulations. https://portal.concytec.gob.pe/images/renacyt/reglamento_renacyt_version_final.pdf
- Costillero, O (2017). What is critical thinking and how to develop it? <https://psicologiaymente.com/inteligencia/pensamiento-critico>
- Chamaine, S. (2013). Positive intelligence. <https://alperformacion.com/wp-content/uploads/2019/03/Inteligencia-Positiva.pdf>
- Elizalde, A., Morales, A. and Aguilar, M. (2022). The importance of critical thinking in the training of graphic design students. *Scielo Magazine, Zincografía vol.6 no.11 Guadalajara Apr. 2022 Epub May 23, 2022.* http://www.scielo.org.mx/scielo.php?pid=S2448-84372022000100210&script=sci_arttext#B7
- Facione, P. (2007). Critical Thinking: What is it and why is it important? <http://www.eduteka.org/PensamientoCriticoFacione.php>
- Gil, J., Melendo, A., Fernández, P., López, M. (2016). Critical spirit and education. Spain: Ceasga. <https://dialnet.unirioja.es/servlet/libro?codigo=663579>
- Hernández, R., Fernández, C., and Baptista, P. (2014). Research methodology. (6th ed.). Mexico: McGraw Hill
- Iberrdrola (s.f). Critical thinking. <https://www.iberdrola.com/talento/que-es-pensamiento-critico-como-desarrollarlo>
- Khairiah, K., Mubaraq, Z., Mareta, M., Th Musa, D., Naimah, D. and Sulistyorini. (2023). Discrimination in online learning during the COVID-19 pandemic in Indonesian higher education. *Magazine Journal Of Law And Sustainable Development.* vol. 11 No. 3 (2023). DOI: <https://doi.org/10.55908/sdgs.v11i3.710>
- Milla, M. (2012). Critical thinking in fifth grade secondary school students from the schools of Carmen de la Legua, Callao. [Undergraduate thesis, Universidad San Ignacio de Loyola, Peru. http://repositorio.usil.edu.pe/bitstream/123456789/1217/1/2012_Milla_Pensamiento_cr%C3%ADtico_en_estudiantes_de_quinto_de_secundaria.pdf
- Machuca, H. (2018). Development of Critical Thinking based on a pedagogical strategy based on Intellectual Standards applied in philosophy for 11 A students of the Padre Manuel Briceño Jáuregui Fe y Alegría Technical Institute. (Scientific article). Autonomous University of Bucaramanga Magazine. Vol.1. <https://revistas.usantotomas.edu.co/index.php/riiep/article/view/4780/4549>
- Mackay, R., Franco, D. and Willacis, P. (2018). Critical thinking applied to research. (Scientific article). *Scielo Magazine.* 10(1). Cienfuegos. http://scielo.sld.cu/scielo.php?script=sci_arttext&pid=S2218-36202018000100336
- Paul, R. & Elder L. (2003). The foundations of Analytical Thinking. <http://www.criticalthinking.org/resources/PDF/SP-Pensamientoanal%C3%ADtico.pdf>
- Paul, R. & Elder L. (2005). Competency standards for critical thinking. https://www.criticalthinking.org/resources/PDF/SP-Comp_Standards.pdf
- Petress, K. (2004). Critical thinking: An extended definition. *Education*, 124(3).
- Rae (2000). Royal Academy Dictionary.
- Ramón, J. (s.f). How to develop your positive intelligence. <https://aceleratucarrera.com/como-desarrollar-la-inteligencia-positiva/>
- Anáhuac University Network (2021). Critical thinking and its importance in your training. <https://www.anahuac.mx/blog/pensamiento-critico-y-su-importancia-en-tu-formacion>
- Rodríguez, H. (2021). What is critical thinking? Discover new approaches and be more innovative. <https://www.crehana.com/blog/marketing-digital/que-es-y-para-que-se-usa-el-pensamiento-critico>
- Salazar, R. (2020). Critical Thinking and academic performance in students of the National and International Reality course of the Faculty of Social Sciences of the Universidad Nacional José Faustino Sánchez Carrión-2018 [Master's thesis. Cayetano Heredia University, Lima, Peru] https://repositorio.upch.edu.pe/bitstream/handle/20.500.12866/7816/Pensamiento_SalazarMeza_Robert.pdf?squence=1&isAllowed=y
- Steffens, E., Ojeda, D., Martínez, O., García, J. Hernández, H. and Marín, F. (2017). Levels of critical thinking in University students in Barranquilla (Colombia). *Space Magazine.* <https://www.revistaespacios.com/a17v38n30/a17v38n30p05.pdf>
- Vaidya, R., Nag, D., Rani, R. y Prasad, K. (2023). Association Among Remote Working and Work-Life Balance with Mediating Effect of Social Support: An Empirical Study Concerning Migrated Employees in Hyderabad, During Covid-19 Pandemic. *Magazine Journal Of Law And Sustainable Development.* 11 (3). DOI: <https://doi.org/10.55908/sdgs.v11i3.425>.