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## EMOTIONAL INTELLIGENCE: CONCEPTUAL FOUNDATIONS AND NEUROEDUCATION FOR 21ST CENTURY INCLUSION

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**Abstract.** Currently, emotional intelligence is undervalued in education; for this reason, the main objective of this work is to provide it with visualization and knowledge for future teachers, as well as to serve as a guide towards a more emotionally intelligent education. Today's education needs a paradigm shift that should be encouraged from childhood to university, and who better to start this change than future teachers. The role of new competencies that base their methodology on emotions is essential in the search for a future society that is more consistent with others. To this end, students must know themselves, their environment and their surroundings, as well as respect, accept and value each of the opinions to which they are exposed. In the study, the term emotional intelligence is defined, structured and commented on, in addition to offering a fusion between emotional intelligence and inclusive education. Also, sustainability will be questioned in connection with emotional intelligence in the education of the 21st century, at different levels; economic, environmental and social. In addition, the terms neuroeducation and emotional intelligence will be related, and finally, the results obtained will be observed through a likert scale where the lack of information on these areas by teachers can be seen.

**Keywords:** emotional intelligence, inclusive education, sustainability, neuroeducation, teacher.

## INTELIGENCIA EMOCIONAL: BASES CONCEPTUALES Y NEUROEDUCACIÓN PARA UNA INCLUSIÓN DEL SIGLO XXI

**Resumen.** Actualmente, la inteligencia emocional se encuentra poco valorada en la educación; por este motivo, el principal objetivo de este trabajo es otorgarle visualización y conocimiento para futuros docentes, así como servir de guía hacia una educación más inteligente emocionalmente. La educación en nuestros días necesita un cambio de paradigma que debe fomentarse desde la etapa infantil hasta la universitaria, y quien mejor para comenzar este cambio que los futuros docentes. El rol de nuevas competencias que basen su metodología en las emociones es primordial para la búsqueda de una futura sociedad más consecuente con el prójimo. Para ello, el alumnado debe conocerse así mismo, al medio y a quien lo rodea, además de respetar, aceptar y valorar cada una de las opiniones a las que se expone. En el estudio, se define, se estructura y se comenta todo lo que contrae el

término inteligencia emocional, además de ofrecer una fusión entre la inteligencia emocional y la educación inclusiva. También, se cuestionará la sostenibilidad en conexión con la inteligencia emocional en la educación del s.XXI, a diferentes niveles; económico, ambiental y social. Además, se pondrán en relación los términos neuroeducación e inteligencia emocional. Finalmente, se observaran los resultados obtenidos a través de una escala likert donde se puede ver la falta de información sobre dichos ámbitos por parte los docentes.

**Palabras clave:** inteligencia emocional, educación inclusiva, sostenibilidad, neuroeducación, docente.

## **Introduction**

The realization of this research not only entails a more than relevant diffusion for this concept. From a teacher's point of view, it is considered that emotional intelligence is very important from an early age and even more so nowadays. The new generations need a change of routine and a solution to the constant exposure they have with the network and other digital media, which is why interpersonal relationships between students are increasingly scarce. Here the main objective we have with emotional intelligence. There can be two types of emotional intelligence in the eyes of the educator, it all depends on the methodology that the teacher carries out.

In the first place, we can speak of emotional intelligence from a traditional point of view, that is, teaching the 'typical' values in a general way in which the teacher comments on values such as companionship, empathy, or honesty but without practicing a constructivist methodology in which they are encouraged; in this way, the teacher does not put this teaching into practice and does not take it to a real situation. On the other hand, there is the teaching of emotional intelligence from an innovative point of view, which is currently instilled in future teachers and which will bring about the first great change in education in the 21st century. In addition, continuing with the aforementioned change, special relevance must be given to the term neuroeducation. The study of the functioning of the brain while it is in the learning or teaching phase makes it possible to take advantage of all those moves that one wants to make. For example, once you know how the student learns best to do a sum (thanks to neuroeducation), the teacher is spared all the time searching for the perfect explanation. Knowledge of neuroeducation is essential for any teacher who wants to teach by extracting from each student the best way to work. In addition, as far as the part of this research is concerned, it has been possible to observe the large number of authors who have been involved in it. In addition, the respondents make us reflect thanks to their answers leading us to find a solution to all this research in which we can develop solutions for our future in the educational field.

The following is a brief reference to the term emotional intelligence according to different authors.

### ***Emotional Intelligence Concept***

Salovey and Mayer (1990) qualify this intelligence as a part of social intelligence. Years later, in the Handbook of Intelligence (Mayer, Salovey, and Caruso, 2000), they defined it as "The ability to perceive and express emotions, assimilate emotions into thought, understand and reason through emotions, and regulate emotions in oneself and others" (p. 396). In contrast, Goleman (1995), says that it is "the ability to recognize and manage our own feelings, motivate ourselves, and monitor our relationships" (p. 3).

Years later, Robbins and Judge (2017) highlighted emotional intelligence as the ability to locate and use emotional cues and/or information.

### ***Inclusive education in relation to emotional intelligence***

Bisquerra (2011) proposes that the important thing would be to find where education has to advance in order to be able to meet the students and attend them equitably. Therefore, the concern for inclusion, social intervention, and/or attention to diversity, causes the educational system to refer to strategies for the comprehensive development of the individual from a perspective where integration involves the intervention of the school, family, and community. LOE (2006) refers to the purpose of education as the training that seeks to promote the development of subjects in social and affective-cognitive aspects. However, the education of emotions to develop as people has had little relevance.

### ***Sustainability in relation to emotional intelligence***

According to Sterling (2004), sustainability is represented by three dimensions, economic, social, and environmental; there are traditional theoretical models that restrict sustainable development to these dimensions as they are insufficient to carry out the subject with all its difficulty. University management and teaching models, in order to adapt to the European Higher Education Area (EHEA) and the needs of the present, require a change in the educational system based on certain competencies necessary for citizens and for their possible personal and professional growth. In addition, academic curricula must include environmental contents and new general changes in the conceptualization of the educational process. We would be talking about a change of educational paradigm that would try to avoid the traditional to methods that exclusively develop reason-cognition, carrying out tasks disconnected from the reality in which we live and from global and local difficulties. In this sense, it is necessary to give value to emotions and the full development of emotional intelligence to achieve a fully sustainable society.

### ***Neuroeducation in relation to Emotional Intelligence***

Neuroeducation is considered a current discipline that merges neuroscience. The one that assumes responsibility for the analysis of the brain together with the sciences of education. Following Guillén (2018), "Neuroeducation aims to improve teaching and learning processes based on what we know about how the brain works. Learning from, in, and for life." (p. 72). Finally, Emotional Intelligence focuses on specific brain centers, which accept the interrelation between the limbic system and the neocortex. Such neuroanatomical components grant human beings different abilities. Following Bueno (2019), certain cognitive or cerebral processes are also named by neuroeducation as constructs that have a certain direct influence on learning and education.

## **Method**

### ***Design***

The method carried out in the elaboration of this study is based on information collected from a Likert scale questionnaire, an additive scale model which belongs to an ordinal level of measurement; it is composed of certain items by way of confirmation in which the person's opinion is requested (Bedoya, 2017). This scale was elaborated and passed to primary education students and current primary school teachers. By means of the information obtained, non-experimental research is proposed, characterized by the non-adulteration of the independent variable, that is, the groups are not randomly distributed. Only the changes that occur in the data are observed through quantitative techniques, variables that have a reference model, specifically, a criterion; allowing the explanatory design which tries to clarify the reasons for the consequences studied, i.e., not only the phenomenon, situation, characteristics, etc., are detailed, according to Salinas (2008); descriptive, which is defined by Glass & Hopkins (1984) as the selection of antecedents that clarify what happens and then structures, tabulates, and figures the data obtained; and correlational, whose objective is to measure the concordance between several variables in a given environment (Cazau, 2006). All this will be shown later, based on the data extracted on the results obtained. Therefore, future teachers and those who are already in educational centers, as the theoretical framework developed above indicates, are responsible for working with emotional intelligence at school.

### ***Population and sample***

The population and the sample that make up this research are a group of future teachers of the fourth year of the degree in primary education and a group of current teachers.

The problem according to Arias (2012), the general and specific objective of this research according to Marín and Lafuente (2008) will be indicated below.

### ***Problem, general objective, and specific objective***

According to Arias (2012), a problem is an issue that requests to be solved with a solution. Research problems are issues of reality that have not been known. Thus, the unknown is an inconvenience for the researcher, who suggests questions about the unknown and will have to seek a solution through research; the answer obtained will form the solution to the problem. Does the current situation on emotional intelligence have a conceptual basis for quality education in the educational field?

According to Quisbert and Ramírez (2011), the research objective arranges and specifies tasks to be performed by the researcher; the objective refers to the variables involved in the research task. By means of the research objective, we manage to give an answer to the problem posed; this objective is proposed for the resolution of some unknown subject. Likewise, two types of objectives can be distinguished according to Marín and Lafuente (2008); the general objective, which should reflect the nature of the problem to be investigated. For this research, the general objective is to analyze the current situation on emotional intelligence, which would consist of creating a conceptual basis of emotional intelligence in teachers for a warm education in the educational environment.

On the other hand, the specific objectives, movements carried out in order to achieve the general objective, are detected. The specific objectives to be mentioned are the following:

- Show the current situation in the field of emotional intelligence.
- Identify the relationship between self-management, self-knowledge, social knowledge, and emotion management.
- Expose the most relevant aspects of emotional intelligence.
- Explain emotional intelligence in the current context.
- Present emotional intelligence in the current educational system.

Consequently, the specific objectives must not only hinder the main objective but must also accept or govern the research in the direction of its end.

The hypothesis is the next point developed in this research where it will be reflected whether it is positive or negative.

### ***Hypothesis***

As a result of the collection of samples for the database, hypotheses have been obtained with numerical estimates for the values of the population studied. For this purpose, statistical analyses have been performed with the researcher being the extractor of the different conclusions on the results presented by the population (Creswell, 2008).

H0, specifically negative, refers to the current situation on emotional intelligence as not consisting in creating a conceptual basis of emotional intelligence in teachers for a warm education in the educational environment.

H1, positive, reflects the current situation on emotional intelligence, as it does not consist of creating a conceptual basis of emotional intelligence in teachers for a warm education in the educational environment.

This is followed by a description of the variables according to Murillo (2011).

### ***Variables***

An independent variable is the quality inferred as the cause of the phenomenon under investigation, and this is the concept used to refer to the variable manipulated by the researcher. However, the dependent variable brings together the changes that occur in the independent variable when it is manipulated. Therefore, what we must abide by will be what we measure, and this will provide us with the information to be considered (Murillo, 2011). In addition, within the independent variables, we find inclusive education, educational sustainability, and neuroeducation; and, in the dependent variables, we find emotional intelligence; these should be moderated separately. Such action strengthens the cause-and-effect logic of an investigation.

Once the variables have been mentioned, we will move on to the instrument where we will also include the operationalization table with its respective items, which can be found in the instrument.

### ***Participants***

The population and the sample that make up this research are a group of future teachers of the fourth year of the degree in primary education and a group of current teachers.

### ***Instruments***

According to Salinas (2008), research instruments refer to templates, questionnaires, and/or scales where the information needed to achieve the results that lead us to reach the objectives set is obtained. For the construction of the instrument, an operationalization table was used where, based on the specific objectives and dimensions, the corresponding items were elaborated.

Table 1

*Operationalization table*

<b>Operationalization Table</b>			
<b>SPECIFIC OBJECTIVES</b>		<b>DIMENSIONS</b>	<b>LIKERT</b>
1. Identify the relationship between self-management,	the	A (Emotional Intelligence)	A1. -Elementary education teachers have knowledge of self-awareness of Emotional Intelligence (EI).

<p>self-knowledge, social knowledge, and emotion management.</p>	<p>Base authors: Goleman (2001) Bisquerra (2007) Bar-On (2006)</p>	<p>A2. -Elementary education teachers are aware of the social awareness of Emotional Intelligence (EI). A3. -Elementary education teachers have knowledge of self-management of Emotional Intelligence (EI). A4. -Elementary education teachers have knowledge of Emotional Intelligence (EI), emotion management/control. A5. -In primary education emotions influence learning.</p>
<p>2. Show the current situation in the field of emotional intelligence.</p>	<p>B (Inclusive Education in Relation to Emotional Intelligence)  Base authors: Aranda (2002) Bisquerra (2011)</p>	<p>B6. -Educational integration is equivalent to educational inclusion. B7. -Educational inclusion involves fostering inclusive values and attitudes. B8. -Educational inclusion is facilitated by emotional intelligence. B9. -Educational inclusion needs the basis of emotional intelligence. B10. -Neurodidactics is key to educational inclusion.</p>
<p>3. Introduce emotional intelligence in today's educational system.</p>	<p>C (Sustainability in Relation with Emotional Intelligence)  Base authors: Colás Bravo (2021)</p>	<p>C11. -Neuroeducation is the study of the brain and its application to the educational context. C12. -Emotional intelligence with neuroeducational basis acquires scientific character. C13. -Teachers have knowledge of the brain areas involved in emotional intelligence. C14. -Teachers are aware of the influence of neurons on emotional intelligence. C15. -Teachers have knowledge of the neurotransmitters of emotional intelligence.</p>
<p>4. Expose the most relevant aspects of emotional intelligence.</p>	<p>D (Neuroeducation in Relation to Emotional Intelligence)  Base authors: Guillén (2018) Mora (2020)</p>	<p>D16. -Emotional intelligence is sustainable at the social level D17. -Emotional intelligence is economically sustainable D18. -Emotional intelligence is environmentally sustainable. D19. -Emotional intelligence is sustainable in the educational system.</p>

Note: Own elaboration

### ***Content validity***

According to Chiner (2011), "the validity of a test indicates the degree of accuracy with which it measures the theoretical construct it is intended to measure and whether it can be used for its intended purpose. That is, a test is valid if it "measures what it claims to measure"; it is the most important quality of a measuring instrument" (p.2). At the same time, Chiner (2011) contributes that "validity has three components: content validity, criterion validity, and construct validity. In the first place, the first of these, content validity, is the one used in this research and refers to "the degree to which the test presents an adequate sample of the content to which it refers, without commissions and without content imbalances" (p.2). In this research, an expert judgment was chosen, selecting nine experts with doctoral degrees who are specialists in the field. The result was optimal, with several variations of ambiguous words and expressions with difficulty of concordance. In conclusion, once the expert judgment was completed, a pilot test was carried out, for which a small group of the sample was taken and the scale was ordered, observing that there were no problems in the scale; with all this, the scale is considered validated.

### ***Reliability (Alpha)***

The use of Cronbach's Alpha coefficient evaluates the reliability of the adapted questionnaire (Junior, 2009); Hora, Monteiro, and Arica (2010), on Cronbach's Alpha coefficient, "a way of estimating the reliability of a questionnaire applied in a survey" (p.5). Examining Cronbach's Alpha, it is observed that its purpose is to verify the consistency of the variables surveyed as firmness with respect to the survey carried out in conjunction only with the individuals surveyed. Hora, Monteiro, and Arica (2010, p. 6), perfecting comment, "The great use and acceptance of my academic degree by Cronbach's alpha coefficient is a determining factor in its adherence to fermentation for reliability evaluation." Concluding, Cronbach's Alpha, whose reliability of the scale is .951, which is following George and Mallery (2003), is excellent. Therefore, the result obtained through the Likert scale is analyzed.

The following is the analysis of the data carried out in this research.

### ***Data analysis***

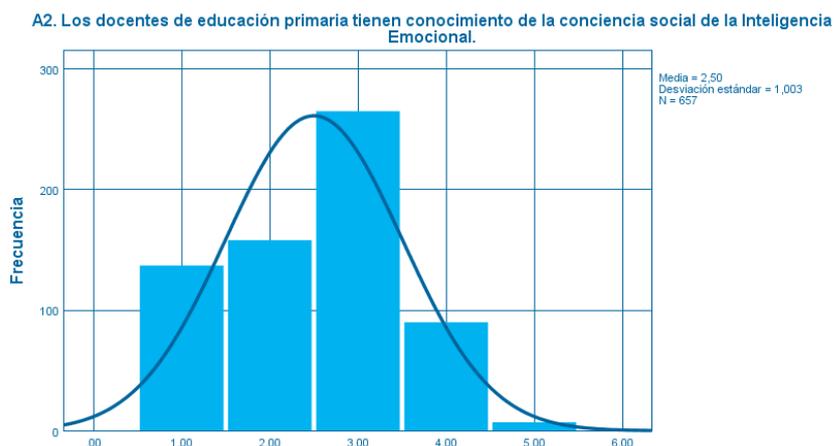
#### ***Descriptive analysis***

The results obtained through descriptive analysis using the likert scale, thanks to the collaboration of future and current teachers, are presented below.

#### ***Dimension A, Emotional Intelligence.***

Analyzing Figure 1, it is observed that it has a negative value -0.57; therefore, the asymmetry is negative, meaning that the data are not grouped around the mean. As for its kurtosis, it turns out to be platykurtic since its value is negative -0.813, and its data are not

clustered at a specific point in the mean. Emphasizing the result shown in the graph, it is interpreted that the teachers surveyed do not know the social awareness obtained from emotional intelligence; the lack of knowledge of this area represents a backwardness in education due to the fact that nowadays an individualized education is pursued contemplating the emotions of each student and trying to work promoting values such as cooperation and teamwork. These values increase empathy, individualized motivation to achieve a group objective and enthusiasm, relevant aspects in emotional intelligence.



*Figure 1.* A2. Primary school teachers' knowledge of social awareness of emotional intelligence.

*Note:* Own elaboration

As can be seen, in this graph the skewness contains positive value ,064 so the skewness is positive, meaning that the data are grouped around the mean. On the other hand, a negative value is found -0,395 on kurtosis, so it is platykurtic and the data are not grouped around a point, to the mean; these are distributed and it is not relatively good. Analyzing Figure 3, it is shown that most of the respondents answer 'indifferent.' It is forgotten that in addition to being teachers, we are also educators, so it is essential to teach both conceptual and attitudinal content. The most important subject that a student learns in education is to know himself, to know how to shuffle the feelings that run through his head from the time he is five years old until he is eleven, and it is reflected that currently there are very few teachers who are trained to teach this competence because even they themselves do not know it. Teachers who are not part of traditional teaching should encourage this 'relationship' between student and teacher.

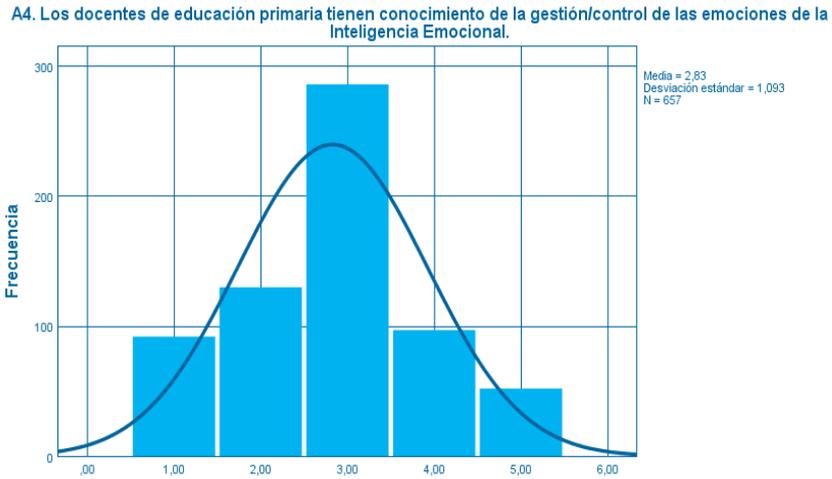


Figure 2. A4. Primary school teachers' knowledge of emotional intelligence of emotion management/control.

Note: Own elaboration

With respect to Figure 3, its asymmetry is positive, 615, grouping the data around the mean; it also shows kurtosis of negative value - 1.180. Therefore, it is platykurtic and the data are not grouped around a point, around the mean, they are distributed and it is not favorable. In this case, as well demonstrated by the teachers interviewed, there are differences between educational integration and educational inclusion. The main difference between them is summarized in that the term integration is defined as the invitation to a person to participate in a subject by adapting to the community he/she is already in. While, on the other hand, the concept of inclusion is defined as an egalitarian model for all in which cooperation and solidarity predominate.

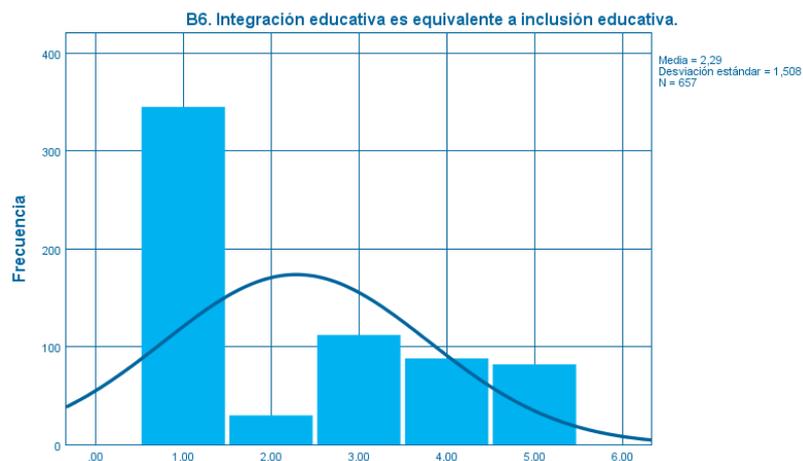


Figure 3. Dimension B. Educational Inclusion.

Note: Own elaboration

Next, negative skewness -1.479 can be seen, causing the data not to be grouped around the mean; the kurtosis value is positive 0.967, being leptokurtic, that is, the data are grouped at a specific point, at the mean. Therefore, as shown in the figure to be discussed, it is verified that teachers certainly know that emotional intelligence promotes educational inclusion. However, this is not the only advantage obtained from emotional intelligence; it also improves self-knowledge and decision making, helps to combat stress and, above all, is a precautionary method for stress, increases personal relationships, and favors personal progress, among other advantages.

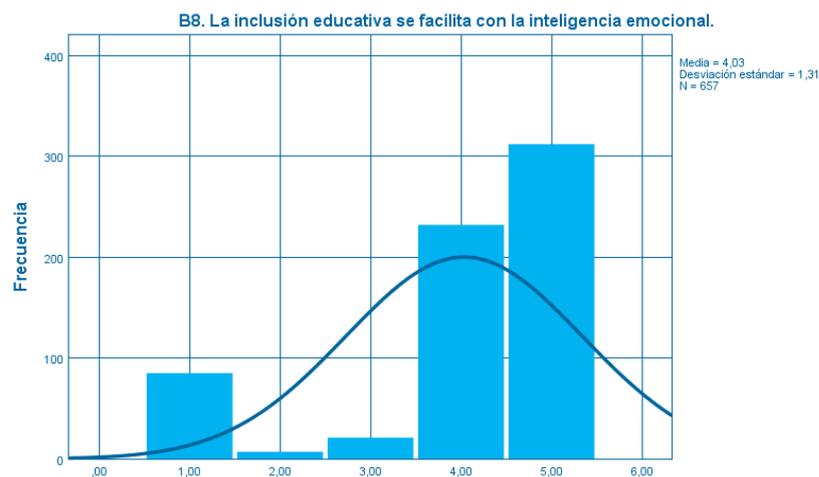


Figure 4. B8. Educational inclusion is facilitated by emotional intelligence.

Note: Own elaboration

Next, in this figure we observe asymmetry of positive value ,068, and its data are grouped around the mean. Negative, the value of its kurtosis - 0.985 being platycurtic, and its data not clustered around the mean if not distributed. This case is not positive. By analyzing the graph, it is perceived that most of the subjects have responded with 'indifferent.' Supporting emotional intelligence through scholarships and grants would benefit education to foster such competence and also teachers who would profit from such scholarship to learn more about emotional intelligence. These scholarships and grants are important to continue the training of teachers in this area of education due to the fact that after the surveys conducted most of them still do not know about emotional intelligence.

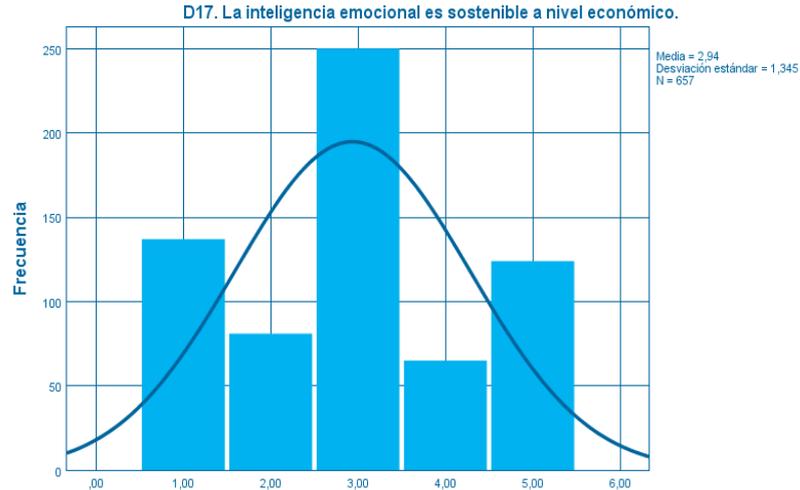


Figure 5. D17. Emotional intelligence is economically sustainable.

Note: Own elaboration

Finally, the asymmetry of this graph is found to be negative  $-0,522$ , indicating that its data are not grouped around the mean; kurtosis is negative  $-1,056$ , so it is platykurtic and the data do not gather around the mean, they are distributed and it is unfavorable. In addition, it can be observed that most of the respondents answer 'indifferent' to the question asked. Emotional intelligence is presented as a problem in today's education by three parameters: economic, social, and environmental. The balance of these three mentioned above would lead to the solution of this unsustainability, and, therefore, to an education where emotional intelligence is one more competence in the curriculum.

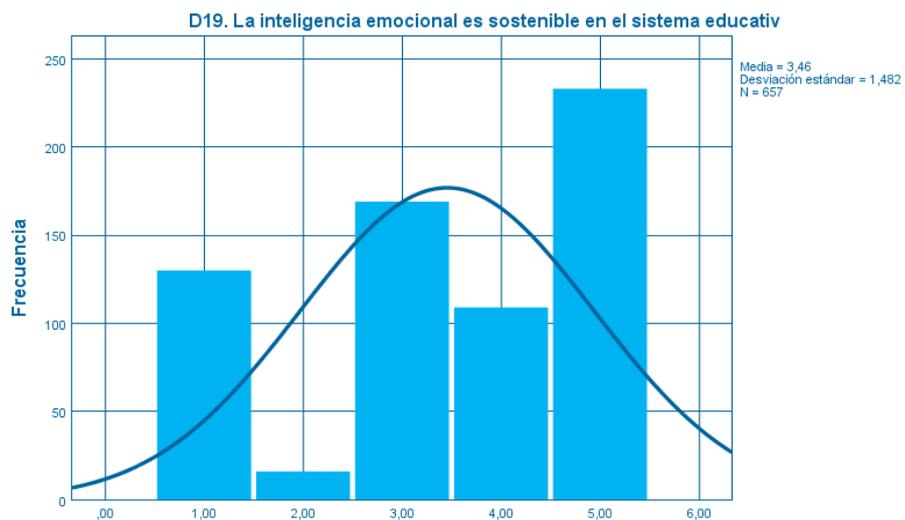
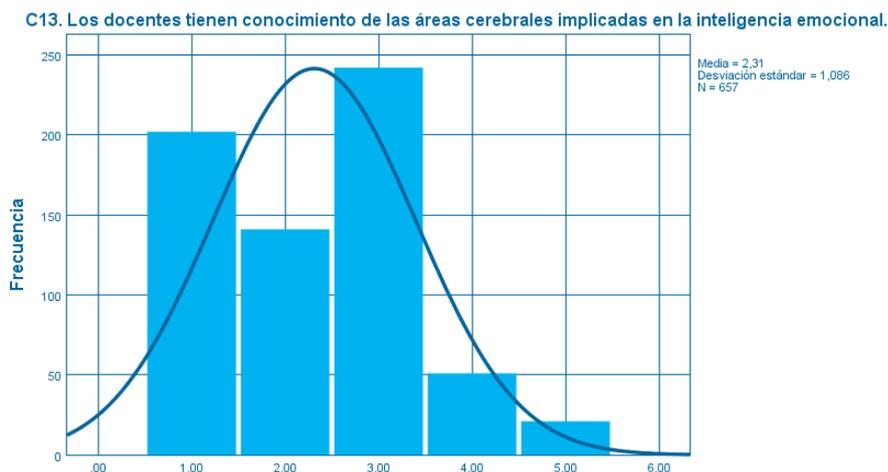


Figure 6. D19. Emotional intelligence is sustainable in the educational system.

Note: Own elaboration

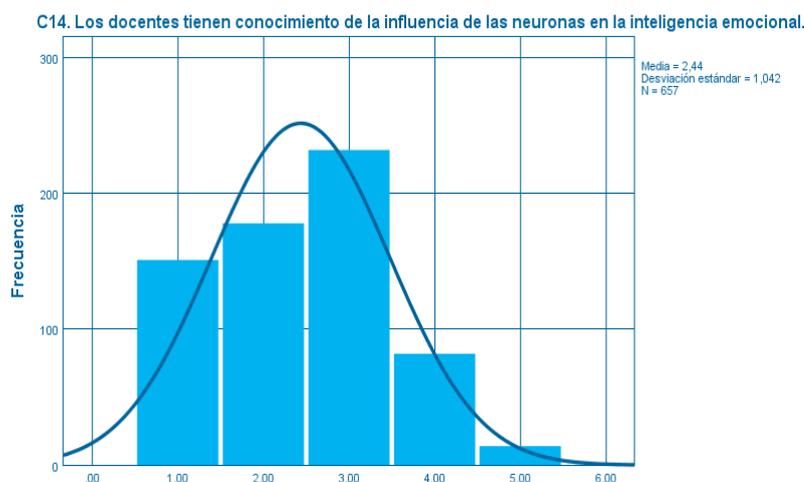
In Figure 7, whose value, ,324, shows positive skewness, meaning that the data are clustered around the mean. On the other hand, its kurtosis obtains a negative value of -0,616, meaning that it is platykurtic, and the data are not grouped around a point, i.e., the mean but are distributed; this being unfavorable. In this case, it can be seen that most of the respondents answer that they disagree with what is asked. Emotional intelligence is located in the cortex of the brain known as prefrontal neocortex, and through neurons it is connected to the limbic system, the place where all human emotions are concentrated.



*Figure 7.* C13. Teachers have knowledge of the brain areas involved in emotional intelligence.

*Note:* Own elaboration

Regarding figure 8, positive value ,173 of asymmetry, the data are grouped around the mean; the value in its kurtosis is negative - 0.703, so its kurtosis is platykurtic, and the data are not grouped around a point, they are distributed and it is unfavorable. Addressing now the question posed in the questionnaire, the interviewees are again unaware of the usefulness of neurons in the field of emotional intelligence. Neurons have the primary purpose in this area of acting as a system that enables the understanding of actions and, therefore, imagination, empathy, and theory of mind.



*Figure 8.* C14. Teachers have knowledge of the influence of neurons on emotional intelligence.

*Note:* Own elaboration

### *Non-Parametric Analysis*

The non-parametric evaluation analysis is based on Farrell's study (1957), where the properties of the set of production processes (SPP) that are likely to be carried out are taught:

- Convexity: the set of productive processes, formed by the productive processes studied and by the convex group that limits it.
- Constant returns to scale (REC): the set of production processes characterized by being composed of linear combinations of the observed production processes.
- Free elimination of inputs and outputs: it implies a productive unit (PU) capable of creating the same amount of output with a higher degree of inputs or a lower degree of output with the same proportion of inputs.

In this research, the null hypothesis is retained; i.e., the data are not normal. In turn, this research has been developed with the use of two samples (future teachers and current teachers), so we will apply a technique used to identify the differences of isolated groups in quantitative variables without a specific distribution, namely the *Mann-Whitney U* technique. The basis is the rank differencing and *t Student's* counterpart in which quantitative variables with normal distribution are defined (Rivas-Ruiz, Moreno-Palacios, Talavera, 2018).

To conclude with the methodological framework, the correlation will be mentioned, specifically the Rho Spearman correlation, exposing the most significant figures in each of the dimensions of this work.

### *Correlation*

The most striking early research on the teaching of this idea is shown in psychology through the pioneering study of Inhelder and Piaget (1955); on correlation, the authors determine that knowledge of the subject of correlation leads to knowledge of the ideas of probability and proportion, as well as combinatorial ability. Rod Spearman correlation table (Annex 2).

### *Rho Spearman correlation*

Spearman's Correlation analysis is a non-parametric statistical method that attempts to analyze the power between two quantitative variables (Mondragón, 2014).

#### Dimension A

A1: The most significant correlation is found in item A1 with A4 with a Spearman coefficient of ,849. Primary education teachers who have knowledge of EQ self-knowledge (A1) are also of the opinion that primary education teachers have knowledge of EQ emotion management/control (A4). The least significant correlation is found in item A1 with D17 with a Spearman coefficient of ,195. Primary school teachers who have knowledge of EQ self-knowledge (A1) also believe that emotional intelligence is economically sustainable (D17).

A5: Consequently, in dimension A, the most significant correlation is found in item A5 with B9 with a Spearman coefficient of .911. Teachers who say that in primary education emotions influence learning (A5) also say that educational inclusion needs the basis of emotional intelligence (B9). In addition, the least significant correlation is found in item A5 with B6 with a Spearman coefficient of .327. In primary education, emotions influence learning (A5); they are also of the opinion that educational integration is equivalent to educational inclusion (B6).

#### Dimension B

B8: The most significant correlation is found in item B8 with A5 and B9, with a Spearman coefficient of .894. Teachers who are of the opinion that educational inclusion is facilitated by emotional intelligence (B8) affirm that in primary education emotions influence learning (A5), in addition to the fact that educational inclusion needs the basis of emotional intelligence (B9). The least significant correlation is found in item B8 with B6, with a Spearman coefficient of .353. Teachers who affirm that educational inclusion is facilitated by emotional intelligence (B8) in turn affirm that educational integration is equivalent to educational inclusion (B6).

B10: The most significant correlation is found in item B10 with B8, with a Spearman coefficient of .865. Teachers who indicate that neurodidactics is key to educational inclusion (B10) also indicate that educational inclusion is facilitated by emotional intelligence (B8). The least significant correlation is found in item B10 with B6, with a Spearman coefficient of .382. Teachers who point out that neurodidactics is key to educational inclusion (B10) also point out that educational integration is equivalent to educational inclusion (B6).

#### Dimension C

C11: The most significant correlation is found in item C11 with C12, with a Spearman coefficient of .802. Teachers who think that neuroeducation is the study of the brain and its application to the educational context (C11) also believe that emotional intelligence with a neuroeducational basis acquires a scientific character (C12). The least significant correlation is found in item C11 with C15, with a Spearman coefficient of .194. Teachers who think that neuroeducation is the study of the brain and its application to the educational context (C11) also think that teachers have knowledge of the neurotransmitters of emotional intelligence (C15).

C13: The most significant correlation is found in item C13 with C15, with a Spearman coefficient of .743. Teachers who have knowledge of the brain areas involved in emotional intelligence (C13) also ensure that teachers have knowledge of the neurotransmitters of emotional intelligence (C15). The least significant correlation is found in item C13 with B6, with a Spearman's coefficient of .045. Teachers have knowledge of the brain areas involved in emotional intelligence (C13), likewise they state that educational integration is equivalent to educational inclusion (B6).

## Dimension D

D18: The most significant correlation is found in item D18 with D17, with a Spearman coefficient of .764. Teachers who say that emotional intelligence is environmentally sustainable (D18) in turn say that emotional intelligence is economically sustainable (D17). The least significant correlation is found in item D18 with C14 with a Spearman coefficient of .060. Teachers who say that emotional intelligence is sustainable at the environmental level (D18) also say that teachers have knowledge of the influence of neurons on emotional intelligence (C14).

D19: The most significant correlation is found in item D19 with D16, with a Spearman coefficient of .903. Teachers who support that emotional intelligence is sustainable in the educational system (D19) think that emotional intelligence is sustainable at the social level (D17). The least significant correlation is found in item D19 with D17 with a Spearman coefficient of .226. Teachers who support that emotional intelligence is sustainable in the educational system (D19) also support that emotional intelligence is sustainable at the economic level (D17).

## Results

Next, the results can be visualized based on the function achieved in the collection of the Likert scale sent to teachers and future teachers who are finishing their training. The representation of the results will be by means of a descriptive analysis of the items considered and the most salient information provided by the data. After this, the descriptive analysis will be exposed with the development of the most striking graphs regarding the research. In addition, as for the descriptive analysis and its correlation, it is observed that the answers of the respondents agree with each other since such knowledge is unconsciously related, producing a significant correlation.

## Discussion and conclusions

To conclude, after carrying out this research and visualizing the answers in the questionnaire, it can be perceived that the process of integration of emotional intelligence in education is slow, but that little by little it is being achieved. Today's teachers have an idea of the concept of emotional intelligence, but they are not yet able to put it into practice with total clarity. In my opinion, the focus of university studies on this concept should be even greater in order to capture the attention of future teachers, so that they are the ones who pursue this education based on it. "Until emotional intelligence is implemented in the classrooms of our country, there will not be the real transformation that the educational system needs," said Punset (2010, p. 23).

On the other hand, inclusive education and emotional intelligence are two concepts that are slightly linked, and, in my opinion, we cannot emphasize one without the other being positively affected, which is why both concepts are growing at the same time. Every teacher who pursues an inclusive education is promoting emotional intelligence and vice versa. We are facing two concepts that will be key in the education of the future, where I hope to find a few

hours a week dedicated to emotional intelligence, and where feelings are worked on in a natural and realistic way.

Finally, neuroeducation cannot be forgotten in this research, focusing it as a main topic addressed in this research; it is concluded that most teachers are unaware of this discipline. However, I am confident that the terms neuroeducation, emotional intelligence, inclusive education, and sustainability will continue to evolve in education and eventually be introduced in education.

The first conclusion is that, in most cases, teachers have a vague knowledge of all the items mentioned in this research. It should be noted that the answers obtained agree with each other, thus producing an interrelation between each of them.

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