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Cultivando la Inteligencia Emocional en la Era de la Inteligencia Artificial: Promoviendo la Educación Centrada en el Ser Humano

Cultivating Emotional Intelligence in the Age of Artificial Intelligence: Promoting Human-Centered Education

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RESUMEN

Este artículo aborda la profundización de la Inteligencia Emocional en la Era de los avances tecnológicos en relación con la promoción de la Educación Centrada en el Ser Humano en Colombia con IA. El objetivo de este artículo se centra en ahora la comprensión de la floración de dominio de las TIC relacionadas con las emociones y el uso posterior de la investigación. La recolección de datos se llevó a cabo a través del análisis documental y el mapeo de IA con implicaciones en el desarrollo de modelos de pensamiento complejo dentro de ajustes significativos en el campo de la educación. Este estudio engloba una investigación documental dirigida a esclarecer las estrechas relaciones entre las conexiones emocionales y las preocupaciones de la inteligencia artificial. Los resultados iniciales revelaron que el aprendizaje emocional podría abordarse mediante la inclusión pedagógica de la tecnología. En conclusión, el aumento tecnológico emergente fomenta el reconocimiento de los seres humanos a partir de interacciones emocionales asertivas.

Palabras clave: *Inteligencia artificial, educación, inteligencia emocional*

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Cultivating Emotional Intelligence in the Age of Artificial Intelligence: Promoting Human-Centered Education

ABSTRACT

This article addresses the deepening of Emotional Intelligence in the Age of technological advances concerning the promotion of Human-Centered Education in Colombia with AI. The objective of this article is centered on eliciting understanding of ICT mastery blossoming related to emotions and further research usage. Data gathering was carried out through documental analysis and AI mapping complex thinking modeling development implications within significant adjustments in the field of education. This study encompasses a documental inquiry towards lighting out the close relations between emotional connections and artificial intelligence concerns. Initial findings revealed emotional learning might be approached through the pedagogical inclusion of technology. In conclusion, the emerging technological increase fosters the recognition of human beings from assertive emotional interactions.

Keywords: *Artificial intelligence, education, emotional intelligence*

INTRODUCCIÓN

The identification of students' emotional states and the implementation of pedagogical approaches that promote their regulation towards ideal states for learning may constitute a significant enhancement in the field of education (Fernández Herrero, J et al., 2023, p. 4). Therefore, the acknowledgment of the importance of identifying students' emotional states and implementing pedagogical approaches to promote emotional regulation represents a crucial advancement in the field of education by recognizing the impact of emotions on learning outcomes. Hence, educators may tailor their teaching strategies to create environments that facilitate optimal emotional states for learning. This holistic approach acknowledges the interconnectedness of cognitive and affective domains in education, emphasizing the need to address students' emotional well-being alongside academic content.

The need to understand emotions has led researchers and educators to inquire about the appropriate regulation of emotional outcomes concerning the manifestation of human wealth. Thus, this documental study tends to analyze databases and academic papers through the exploration of technological nuances which boost a meaningful learning process.

On the one hand, The correlation between student motivation and engagement in the learning process is closely connected to the proper management of emotions, which can be linked to specific educational activities, strategies, and methodologies (Fernández Herrero, J et al., 2023, p. 2). Henceforth, once students are emotionally invested in what they're learning, their motivation to participate and engage in the educational process naturally increases motivation and engagement underscoring the pivotal role emotions play in the learning journey. Also, emotions act as a driving force, influencing how students perceive, interpret, and interact with the material presented to them. On the other hand, educators must recognize the significance of addressing emotions in the classroom to foster a conducive learning environment. So then, the identification of students' emotional states and the implementation of pedagogical approaches that promote their regulation towards ideal states for learning may constitute a

significant enhancement in the field of education and the acknowledgment of the importance of identifying students' emotional states and implementing pedagogical approaches to promote emotional regulation representation. It is crucial then to foster advancement in the field of education by recognizing the impact of emotions on learning outcomes and tailoring their teaching strategies to create environments that facilitate optimal emotional states for learning. This holistic approach acknowledges the interconnectedness of cognitive and affective domains in education, emphasizing the need to address students' emotional well-being alongside academic content.

Hence, acknowledging the presence of hurdles is imperative in any endeavor, especially when delving into the realm of artificial intelligence and machine learning. The necessity for an enlarged dataset is paramount, serving as a cornerstone for the seamless operation of neural networks employing deep learning methodologies. Despite these challenges, the system's resilience shines through, persisting in its quest for knowledge and refinement (Trabelsi Z et al., 2023). Recognizing the existence of surmounted obstacles includes the necessity for an expanded dataset, a crucial component for the optimal functioning of neural networks that employ deep learning techniques towards the persistence of language acquisition by utilizing artificial intelligence and machine learning.

This article might reveal the benefits that including ICTs within the educational context relates to the socio-affective well-settled development. Also, scholars interested in mapping out the features of emotional connections may find useful the introduction of software into the pedagogical contemporary perspectives.

METHODOLOGY

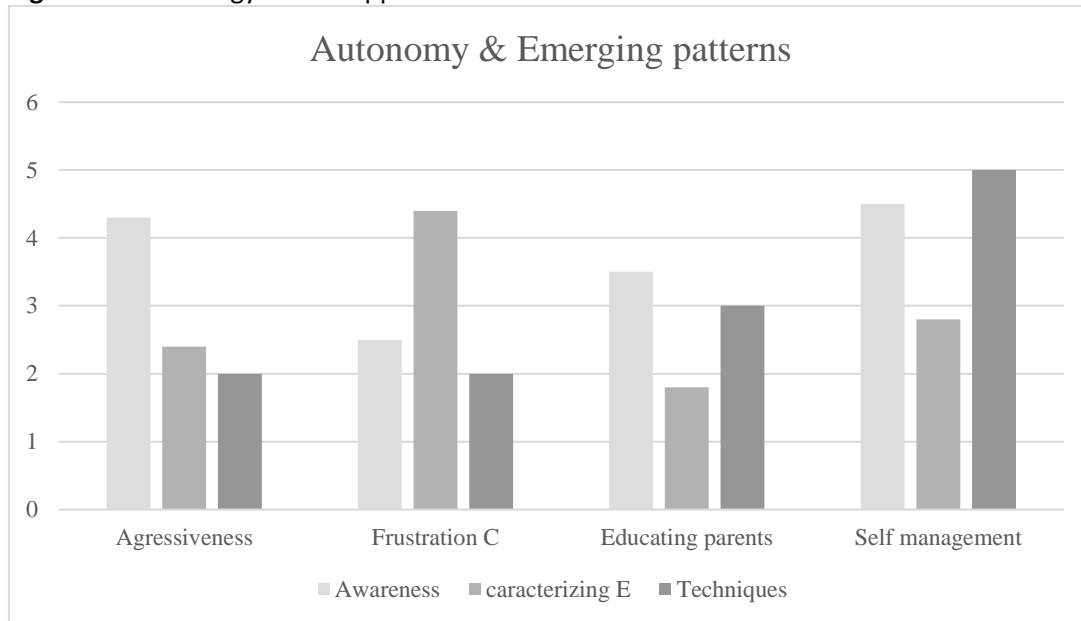
This article addresses qualitative research regarding (Sampieri's, 2003, p. 40) vision of formulating ideas and conjectures before, during, and after the collection and analysis of data. Often, these endeavors serve to initially determine the significance of the research questions and subsequently refine and address them. The process of inquiry fluctuates between the

examination of facts and the interpretation, resulting in a more cyclical approach where the sequence of events is not always consistent, as it varies for each student. Hence, research is a not linear path but rather a dynamic process that involves continuous engagement with ideas, data, and interpretations boosts the ability to formulate a hypothesis at any time within its cyclical process. In this way, the inquiry process fluctuates between examining the facts and interpreting them, which allows for a deeper understanding of the phenomenon under study. (Quecedo,2003) lines up the aim of qualitative research to offer valuable descriptive information concerning the contexts, actions, and beliefs of individuals in educational environments aligned with the natural occurrence of educational processes, and it is utilized for purposes of evaluation and theoretical exploration. (Carrillo, 2020) established the approach of qualitative research involving the alterity of a phenomenon through the examination of qualitative data, ultimately enabling problem resolution. So, qualitative research may also present a distinct methodology for understanding and addressing complex phenomena by emphasizing the analysis for an in-depth exploration of reality. Instead of merely accumulating numerical and statistical information, qualitative research strives to grasp the experiences, perceptions, and significance underlying the data. Thus, documentary research is an adequate type of research that relies on the examination of specialized written materials, enabling a comprehensive understanding of the scope of a phenomenon within the educational domain through the systematic organization of information. In the contemporary realm of scientific data, a diverse range of expertise is necessary for the documentation and effective utilization of obtained data. Specific competencies, like cognitive capacities, are vital for comprehending and assessing data, along with establishing suitable selection criteria. (Gomez, 2004) highlights documentary research is a fundamental pillar in the educational sphere as it provides a solid knowledge base through the examination of specialized written materials. This form of research is characterized by its focus on the collection and analysis of documents such as books, academic articles, and reports, among other written resources. By focusing on the review and analysis of these materials,

documentary research allows for a deep and thorough understanding of the scope of a phenomenon within the educational context. Through this systematic organization of obtained information, the identification of trends, patterns, and relationships that may exist in the field of study is facilitating the ever-evolving realm of contemporary scientific knowledge, the acquisition and efficient handling of data are now considered essential proficiencies. It is now a necessity to not only have access to various information sources but also to possess a wide array of knowledge to document and utilize that information effectively; within these competencies, cognitive abilities assume a pivotal significance.

A compilation of one hundred registers about technology and its approach to the field of education were disclosed into emotional connections, AI implicatures and pedagogical benefits of ICT in the educational context. Related to emotions it is feasible that most strategies are been conceived from fostering awareness of feelings and emotions. Mainly, violence and aggressiveness reported at the school scene have centered the attention on self-management of feelings while facing frustration at school. 65 % of sources outlined the blossoming of awareness after pedagogical interventions, meanwhile characterizing emotions with the inclusion of technology led to 5 % of proposals in which there was no time to implement, as it could be only centered on educating parents and teachers about techniques to cover emotional reactions. 30% of data pointed out the new trends of using AI within educational environments towards lighting motivation, immediate feedback, and emerging paradigms concerning autonomy and the post-pandemic realities.

Figure 1. Technology and its approach to the field of education



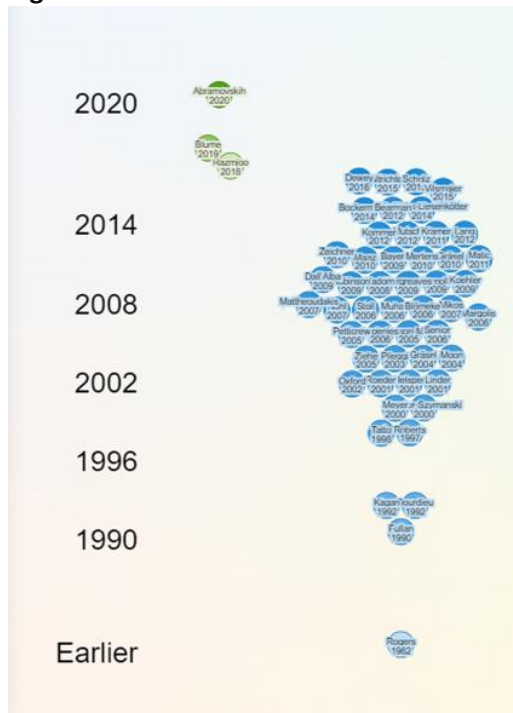
Self-authorship

The figure displays data on the relationship between aggressiveness, frustration, educating parents, and self-management in children, a clear pattern emerges showing a potential link between educating parents and improved self-management skills in children, the data suggests that addressing parental education may positively impact children's ability to manage their emotions and behaviors understanding this correlation can help in developing interventions that focus on educating parents to enhance children's self-regulation abilities. Further research could explore the mechanisms through which parental education influences children's self-management skills.

The data presented in the analysis suggests a potential link between educating parents and improved self-management skills in children. This correlation indicates that addressing parental education may positively impact children's ability to manage their emotions and behaviors. Understanding this relationship can be instrumental in developing interventions that focus on educating parents to enhance children's self-regulation abilities. The analysis of the relationship between aggressiveness, frustration, educating parents, and self-management in children reveals a significant correlation between educating parents and improved self-management

skills in children. This understanding can serve as a foundation for the development of interventions and educational practices that prioritize parental education to enhance children's emotional and behavioral management skills, thereby positively impacting their overall well-being and development.

Figure 2. Research Rabbit timeline



In the wake of the pandemic, there has been a notable surge in the number of studies focused on the intersection of technology and human emotions. This increase stands in stark contrast to the relatively limited attention given to this area in the years preceding the global health crisis. The years 2018 and 2019 witnessed a noticeable gap in research pertaining to emotional studies and technology correlations, with a paucity of comprehensive investigations into this crucial nexus. However, the onset of the pandemic prompted a paradigm shift, leading to a significant uptick in scholarly inquiries examining the impact of technology on human emotions, mental well-being, and social interactions. Notably, new trends in emotional studies have emerged, with researchers increasingly exploring the influence of digital tools, virtual communication platforms, and artificial intelligence on individuals' emotional experiences and psychological

health. These studies aim to elucidate the evolving dynamics of human emotions in the digital age, paving the way for a deeper understanding of the intricate interplay between technology and the human psyche.

DISCUSSION

Deepening into the understanding of the phenomenon, it is pivotal to delve into utilizing cultural beliefs and corresponding emotions to deduce the moral and social consequences to construct more profound insights of individuals eliciting more extensive viewpoints regarding themselves (Gotlieb et al., 2024). Also, the complex interaction among personal perspectives, societal norms, and emotional reactions serves as the foundation for a more profound comprehension of oneself, others, and the societal systems we are a part of. It is intriguing to contemplate how our cultural backgrounds not only influence our viewpoints but also impact our understanding of ethical and social consequences.

These viewpoints go beyond simple observations and enable a more comprehensive grasp of the intricacies present in human relationships and societal frameworks. Hence, individuals encountering various cultural beliefs are encouraged to examine alternative perspectives for perceiving the world.

Guo et al., 2024) highlighted facial expression-based emotion recognition technology may be employed regarding computer vision and artificial intelligence for the purpose of discerning an individual's psychological emotions. Thus, technology epitomizes an intriguing convergence of computer vision and artificial intelligence, providing insight into the capability of technology to comprehend human emotions through the examination of facial cues and patterns, this technology aims to distinguish the intricate fabric of psychological emotions that influence our human experience and the trends in the field of research lead technology leverages to boost the potential of machine learning algorithms to interpret the subtle language of facial expressions. Therefore, emotion recognition technology is utilized in a variety of applications within the clinical domain, exerting a positive influence on clinical investigations and ultimately resulting in

accurate diagnoses, interventions, and therapies, thereby potentially improving the mental well-being of patients and the outcomes of their treatments (Guo et al., 2024). The integration of emotion recognition technology in clinical settings represents a significant advancement in the field of mental healthcare. Through the application of artificial intelligence and machine learning, healthcare providers gain the ability to explore the emotional states of individuals in greater depth, resulting in more accurate diagnoses and tailored interventions that hold relevance in the realm of Education. Emotion recognition technology essentially provides healthcare professionals with a window into the psychological world of their patients, presenting valuable insights that may not be readily apparent using conventional assessment methods alone. Through analysis of subtle cues in facial expressions enables clinicians to enrich their understanding of their patients' emotional landscapes and to develop treatment approaches that are individualized accordingly. Also, in view of the contemporary era of mobile and interconnected devices, technology plays a pivotal role in shaping our modes of communication, social interaction, and even our educational processes which influences the personal development and adaptation of individuals (Oliveira et al., 2016) In the contemporary interconnected global environment, characterized by the widespread presence of mobile devices and the dominance of digital communication platforms, technology has emerged as a pivotal force influencing nearly every facet of our existence. The way in which we engage in communication and our personal development and adaptation, especially among younger cohorts like millennials, are significantly impacted by technology.

It is common to consider these cultural elements as distinct from and autonomous to design due to their high adaptability and variability (Edwards et al., 1994) Thus, scrutinizing the complex correlation between computer technology and the societal construction of knowledge and values, dynamic interaction recognition consistently molds and transforms our cultural environment. This occurrence highlights the mutual process in which technological progressions not solely mirror but also shape the changing societal standards, convictions, and principles.

Therefore, analyzing the complex interplay between computer technology and social support, it is crucial to recognize that social support has been recognized as the primary determinant of favorable mental health outcomes. This is especially relevant in situations where face-to-face interaction is unattainable and in communities marked by physical separation. Thus, it is imperative to explore the role of communication technology in fostering posttraumatic growth and overall well-being (Canale et al., 2021). Social support, acknowledged as a key factor influencing positive mental health outcomes, assumes greater significance in circumstances where in-person interaction is restricted or unavailable, such as in communities marked by physical distance or during periods of adversity. The advent of communication technology has fundamentally altered the landscape of social support, providing innovative avenues for connection and solidarity emotional sharing, information dissemination, and practical aid.

The effective utilization of digital technology through e-motions and e-support, along with the prompt accessibility of these resources, could potentially enhance the societal and governmental endorsement of these technologies in various healthcare domains (Canale et al., 2021) bearing in mind the current dynamic environment and the efficient application of digital technology presentation of a significant opportunity to transform the provision of care and assistance. Fundamental to this change are the notions of e-motions and e-support, which entail the amalgamation of digital platforms and instruments to enable the articulation of emotions, interaction, and community reinforcement within healthcare sectors. Henceforth, it is remarkable the augmented increase of information related to solutions for various educational inquiries online. The frequently utilized sources during oral reading exercises may take students to the capability to conveniently retrieve a wide array of reading materials across different proficiency levels using devices (Jo Shan Fu, 2013). ICT endorsement has emerged as a potent instrument, presenting ingenious solutions to enrich learning experiences and results. An exemplary instance of ICT's influence can be observed in the incorporation of e-books into

reading classroom environments as versatile tools that enable oral reading activities and bolster literacy advancement.

Besides, drawing from a pedagogical framework centered on active learning may light up students to direct their attention towards more advanced theoretical frameworks instead of engaging in lower-level, trivial activities. (Levin & Wadmany 2006). Active learning's pedagogical framework has garnered attention due to its focus on student engagement, critical thinking, and higher-order cognitive skills. The essence of active learning lies in students playing an active role in their learning process, going beyond passively receiving information to actively constructing knowledge through inquiry, discussion, and application. Then, educational sources are about to refer to a new era after the inclusion of artificial intelligence with a diverse array of technologies, characteristics, and capabilities determining the diverse scope of progression concerned to Artificial Intelligence embodying stimulating prospects for the field of education. Then, to fully harness its capabilities within educational settings, it is imperative to establish connections between the technological advancements in AI and its practical applications concerning productive skills. (Zhang K et al., 2021). Research in the field of AI education has not kept pace with the swift progress of AI technology in order to offer empirically supported recommendations and assistance for the implementation of AI in educational settings. (Zhang K et al., 2021) However, reflecting on the swift advancement of Artificial Intelligence may rely on great potential towards revolutionizing the field of education through the provision of innovative solutions aimed at improving the quality of teaching and learning experiences. Given the wide range of technologies, features, and capacities associated with AI, there are exciting opportunities for educators who are interested in adjusting and advancing their teaching methods to better cater to the needs of a varied student population in the era of digitalization. Hence, AI development has unveiled intriguing possibilities for its incorporation within educational environments with the potential to transform teaching and learning encounters.

CONCLUSION

It has been identified that there is an increase in scientific activity regarding the use of artificial intelligence today; up until 2020, records have shown growth and all higher education institutions. The research article's conclusion underscores the significant increase in scientific activity surrounding the use of artificial intelligence, particularly evident in the growth of records until 2020 and the projection of artificial intelligence courses by all higher education institutions for 2024. The emergence of technology, predominantly between 2002 and 2014, experienced a hiatus during the pandemic, leading to a temporary halt in productivity. However, a resurgence is observed for the year 2024, as evidenced by the substantial investigative exercise conducted by numerous sources. Notably, the post-pandemic period has seen a revival in academic productions concerning individual behavior in social contexts, with a focus on addressing emotions through the use of artificial intelligence and technology. While acknowledging the barriers, such as the lack of knowledge about the use of platforms, it is evident that the government prioritizes technological competencies and indicators. This aligns with the abstract's objective of promoting Human-Centered Education in Colombia with AI, emphasizing the deepening of Emotional Intelligence in the Age of technological advancements. The study successfully illuminates the close relations between emotional connections and artificial intelligence concerns, ultimately recognizing the increasing technological influence in fostering assertive emotional interactions among human beings. The millennium, from 2002 to 2014, leaving a gap during the pandemic. Obviously, there is a halt to productivity where the process of adaptation mediated by technology can be seen. Following this, we find ourselves again, and at this moment, we see a resurgence for the year 2024 with the investigative exercise we conduct from a significant number of sources. It can also be noted that in the work on emotional aspects post-pandemic, various academic productions regarding individual behavior in social contexts are being resumed. Other findings indicate that emotions can be addressed with the use of artificial intelligence and technology, with several approaches found in this regard. One

of the barriers is the lack of knowledge about the use of platforms, which, as a developing country, we are still working on. However, it is one of the government's priorities, and the presence of these indicators and technological competencies is increasingly evident.

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