IOSR Journal of Research & Method in Education (IOSR-JRME)
e-ISSN: 2320–7388, p- ISSN: 2320-737x Volume 16, Issue 3 Ser. 4 (May. – June. 2026) 01-10
www.iosrjournals.org

Emotional Intelligence, Artificial Intelligence, and Non-Intelligence: Theoretical Foundations for a Critical Twenty-First-Century Education

Alexandre Vidal de Sousa[1]; Bianca Rodrigues Holanda[2]; Fernanda Maria Diniz da Silva[3]; Fernângela Diniz da Silva4[3]: Francisco José Lopes Cajado[5]; Givanildo Ximenes Santana[6]; Irene Mendes Fontes[7]; Jordana Sousa Barros[8]; Juvanildo Terra de Alencar Junior[9]; Leide Ana Rabelo Magalhães[10]; Maria Antônia do Socorro Rabelo Araujo[11]; Maria Marcyara Silva Souza[12] Michele Aragão Fernandes[13]; Paulo Henrique Barbosa Sousa[14]; Régia Maria Carvalho[15] Rickardo Léo Ramos Gomes[16]; Rosangela Couras Del Vecchio[17].

[1](Master's Degree in History from the Federal University of Ceará (UFC); [2](Master's Degree in Arts from POFARTES – Federal University of Ceará - UFC); [3](Postdoctoral Researcher in Education at the Federal University of Ceará - UFC); [4](PhD in Letters, with a concentration in Comparative Literature, from the Federal University of Ceará - UFC); [5](Prof. Dr. In Agricultural Biotechnology (RENORBIO – UFC); [6](Ph.D. In Genetics, Conservation, And Evolutionary Biology National Institute Of Amazonian Research, Manaus-AM, Brazil); [7](Postgraduate Degree In Criminal Law From Uniateneu University Center); [8](Master's Student in the Professional Master's Program in Mathematics in National Network (PROFMAT), Federal Rural University of the Semi-Arid Region - UFERSA); [9](Doctorate in Educational Sciences from Universidad del Sol – UNADES - Brasil); [10](Master of Science in Tourism Business Management from the State University of Ceará - UECE). [11]Master's degree in Business Administration. Universidade Federal do Ceará - UFC); [12](Master's Degree in Sociobiodiversity and Sustainable Technologies, University of International Integration of the Afro-Brazilian Lusophony - UNILAB); [13](Master's Degree in Administration and Controllership from Federal University of Ceará); [14](Ph.D. in Educational Sciences, FCSA (DINTER Program); [15](Master's Degree In History From The Federal University Of Pernambuco – UFPE); [16](Dr. in Biological Sciences (Cultural Title) – FICL; Master's degree in Crop Science – UFC); [17](Doctorate in Education from Universidad Americana).

Abstract:
Background: *The technological, informational, and social transformations that characterize the twenty-first century have generated new challenges for educational systems, requiring approaches capable of integrating human development, technological innovation, and critical education. In this context, the discussion of Emotional Intelligence, Artificial Intelligence, and Non-Intelligence has gained increasing relevance, as these dimensions directly influence teaching and learning processes, knowledge construction, and the development of citizens capable of acting ethically, reflectively, and responsibly in contemporary society. Accordingly, this study aimed to investigate the theoretical foundations of Emotional Intelligence, Artificial Intelligence, and Non-Intelligence, considering the implications of these concepts for the promotion of critical, reflective, and socially responsible education in the twenty-first century.*
Materials and Methods: *This study adopted a qualitative research approach. Data were collected through two complementary methods: a bibliographic review and documentary research. These procedures enabled the examination of theoretical and conceptual contributions related to Emotional Intelligence, Artificial Intelligence, and Non-Intelligence within contemporary educational contexts.*
Results: *The findings demonstrated that the development of critical education in the twenty-first century depends on the articulation of socio-emotional competencies, the responsible use of Artificial Intelligence, and an understanding of phenomena associated with Non-Intelligence. Emotional Intelligence was found to foster integral human development and ethical formation, while Artificial Intelligence expands pedagogical possibilities and access to knowledge, although it also requires careful consideration of ethical, legal, and educational issues. Furthermore, misinformation, cognitive biases, and uncritical thinking were identified as significant challenges to contemporary educational processes.*
Conclusion: *The study concludes that the integration of Emotional Intelligence, Artificial Intelligence, and Non-Intelligence contributes to strengthening students' intellectual autonomy, social responsibility, and reflective*

capacity. Such integration supports the construction of an educational model aligned with the demands of contemporary society and capable of promoting critical, ethical, and socially engaged citizenship.

***Key Word**: Emotional Intelligence; Artificial Intelligence; Critical Education; Non-Intelligence.*

Date of Submission: 06-06-2026 Date of Acceptance: 17-06-2026

I. Introduction

The social, technological, and cultural transformations that have characterized the early decades of the twenty-first century have generated profound changes in the production, circulation, and appropriation of knowledge. In this context, education assumes a central role in fostering individuals capable of critically understanding reality, making informed decisions, and acting ethically within an increasingly interconnected digital society. The expansion of access to technologies, the exponential growth of information, and the advancement of intelligent systems have imposed new demands on educational systems, requiring approaches that integrate cognitive, emotional, and technological competencies.

Simultaneously, the advancement of Artificial Intelligence, the growing recognition of socio-emotional skills, and increasing concerns regarding misinformation, cognitive biases, and uncritical thinking have stimulated scholarly interest in investigating the interactions among these phenomena. In this regard, the articulation of Emotional Intelligence, Artificial Intelligence, and Non-Intelligence may play a fundamental role in the development of educational practices that promote intellectual autonomy, social responsibility, civic engagement, and critical reflection. Examining these dimensions provides an opportunity to better understand the contemporary challenges faced by education and to identify pathways for preparing individuals to address the complexities of modern society.

Accordingly, the primary objective of this study is to investigate the theoretical foundations of Emotional Intelligence, Artificial Intelligence, and Non-Intelligence, considering the implications of these concepts for the development of a critical, reflective, and socially responsible educational framework in the twenty-first century. To achieve this objective, the following specific aims were established: (i) to examine the principal concepts of Emotional Intelligence and its relevance to the development of socio-emotional competencies essential for students' holistic formation; (ii) to investigate the potentialities and challenges of Artificial Intelligence in teaching and learning processes, particularly regarding its impact on the production, mediation, and democratization of knowledge; (iii) to analyze the concept of Non-Intelligence and its manifestations within educational contexts, with emphasis on misinformation, uncritical thinking, cognitive biases, and limitations in decision-making processes; and (iv) to examine the relationships and interdependencies among Emotional Intelligence, Artificial Intelligence, and Non-Intelligence, identifying their contributions and challenges to the construction of critical education in the twenty-first century.

This study adopts a qualitative research approach. Two research methods were employed: a bibliographic review and documentary research. Through the application of these procedures, it was possible to gather, analyze, and interpret diverse theoretical and normative contributions related to the topics under investigation, thereby enabling a comprehensive understanding of the conceptual foundations underpinning the study.

The article is organized into four main sections. The first section comprises this Introduction, which presents an overview of the topic, the research objectives, and the methodological approach. The second section describes the Methodology, detailing the procedures employed in conducting the investigation. The third section presents the Theoretical Framework, encompassing discussions on Emotional Intelligence, Artificial Intelligence, Non-Intelligence, and the interrelationships among these categories in the development of critical education in the twenty-first century. Finally, the fourth section presents the Final Considerations, which synthesize the principal findings, discuss the reflections emerging from the study, and outline perspectives for future research.

II. Material And Methods

Esta pesquisa está alinhada com as discussões atuais sobre educação, tecnologia e o desenvolvimento humano, especialmente no que se refere à Inteligência Emocional, Inteligência Artificial e a ausência de Inteligência, e como essas questões podem contribuir para uma educação crítica no século XXI. Essa temática se torna relevante em virtude das intensas transformações sociais, culturais e tecnológicas que vêm moldando, em todo o mundo, os processos de ensino e aprendizagem. No cenário atual, que é caracterizado pela crescente disseminação das tecnologias digitais, pela velocidade na circulação de informações e pela urgente necessidade de se formar cidadãos capazes de interpretar criticamente a realidade, faz-se imprescindível entender como as competências emocionais, os meios tecnológicos e os elementos relacionados ao pensamento acrítico impactam a formação educacional. Dessa maneira, esta pesquisa se propôs a contribuir com a discussão científica sobre os desafios e as potencialidades que surgem da articulação entre essas três esferas, especialmente no que tange à formação de indivíduos autônomos, críticos e responsáveis socialmente.

A pesquisa é, portanto, qualitativa em sua metodologia. Conforme Creswell e Creswell (2018), a pesquisa qualitativa se concentra na interpretação de significados, experiências e percepções, permitindo uma compreensão mais rica dos fenômenos em seus contextos sociais e das múltiplas camadas que envolvem determinado objeto de estudo. Sua importância para a pesquisa científica internacional deve-se à possibilidade de investigar fenômenos humanos e sociais que não podem ser explicados apenas por dados quantitativos ou por relações estatísticas. No âmbito educacional, essa perspectiva tem sido extremamente valiosa para a compreensão dos processos de aprendizagem, das práticas pedagógicas, das inovações tecnológicas e das interações socioculturais que envolvem a produção do conhecimento, permitindo análises contextualizadas e teoricamente robustas.

Para a condução da pesquisa, foram utilizados dois métodos: revisão bibliográfica e pesquisa documental. Um dos procedimentos mais comuns na produção científica internacional é a revisão bibliográfica, pois ela sistematiza, analisa e interpreta o conhecimento já produzido sobre um determinado tema, o que possibilita identificar convergências, divergências e lacunas na literatura especializada (Cavalcante & Oliveira, 2020; Arantes, 2025). A revisão bibliográfica, neste estudo, foi embasada na análise de 24 fontes de pesquisa entre 2012 e 2026, que compreendem teses, monografias, artigos científicos publicados em periódicos especializados e livros acadêmicos que tratam das temáticas da Inteligência Emocional, Inteligência Artificial, Não Inteligência, educação crítica, desinformação, letramento midiático e formação docente.

Além disso, utilizou-se a pesquisa documental, que consiste na análise de documentos oficiais, normativos e institucionais, permitindo uma compreensão mais profunda do contexto em questão e a formulação de interpretações bem fundamentadas sobre um fenômeno social específico (Arantes, 2025). A relevância desse procedimento para a pesquisa científica global está na capacidade de acessar dados gerados por organismos estatais e instituições tanto nacionais quanto internacionais, o que aumenta a robustez analítica das investigações. Foram, então, examinados os seguintes documentos: o Projeto de Lei nº 2338, de 2023, que estabelece as diretrizes para o desenvolvimento e uso responsável da Inteligência Artificial no Brasil; a Lei nº 14.533, que institui a Política Nacional de Educação Digital, de 11 de janeiro de 2023; e o documento Guidance for Generative AI in Education and Research, publicado pela UNESCO em 2023, que oferece diretrizes sobre a utilização de sistemas de Inteligência Artificial generativa na educação e na pesquisa.

A articulação entre a revisão bibliográfica e a pesquisa documental se mostrou pertinente aos objetivos delineados, pois possibilitou uma articulação entre a produção científica especializada e os marcos normativos contemporâneos acerca da educação e da Inteligência Artificial. A revisão bibliográfica trouxe a fundamentação teórica indispensável para entender os conceitos, discussões e evidências presentes na academia, e a pesquisa documental permitiu analisar diretrizes e normativas institucionais que impactam diretamente na efetivação desses assuntos nos sistemas de ensino. Assim, a articulação desses procedimentos possibilitou uma análise aprofundada do objeto de investigação, o que favoreceu a construção de interpretações embasadas sobre as relações entre Inteligência Emocional, Inteligência Artificial e Não Inteligência na educação crítica do século XXI (Cavalcante & Oliveira, 2020; Creswell & Creswell, 2018; Arantes, 2025).

III. Theoretical Framework

The theoretical framework was organized into four complementary and interconnected sections, with the purpose of providing a comprehensive understanding of the central dimensions investigated in this study. Initially, the section entitled *"Emotional Intelligence and Human Development: Conceptual Foundations and Contributions to Contemporary Education"* presents the principal theoretical frameworks related to the development of socio-emotional competencies and their contributions to students' holistic formation. Subsequently, the section *"Artificial Intelligence in Education: Applications, Pedagogical Possibilities, and Ethical Challenges"* examines the technological advances associated with Artificial Intelligence, its applications within educational contexts, and the challenges arising from its implementation. The third section, *"Non-Intelligence and Critical Education: Understanding Cognitive Limitations, Misinformation, and Non-Reflective Thinking"*, analyzes the factors that influence the development of uncritical thinking, cognitive biases, and the impacts of misinformation on educational processes. Finally, the section *"Articulations among Emotional Intelligence, Artificial Intelligence, and Non-Intelligence in the Construction of Critical Education for the Twenty-First Century"* provides an integrative analysis of these three dimensions, highlighting their relationships, interdependencies, and contributions to the formation of critical, reflective, autonomous, and socially responsible individuals capable of addressing the challenges of contemporary society.

3.1 Emotional Intelligence and Human Development: Conceptual Foundations and Contributions to Contemporary Education

In recent years, and particularly over the last few decades, Emotional Intelligence has emerged as a highly relevant topic and has attracted considerable scholarly attention. Emotional Intelligence broadens and enriches traditional understandings of human intelligence. For a long period, human intelligence was primarily perceived as the capacity for logical reasoning and analytical thinking. However, Emotional Intelligence offers a broader

perspective, encompassing the ability to recognize, understand, and regulate both one's own emotions and those of others (Goleman, 2012).

According to Goleman (2012), Emotional Intelligence is defined as a set of skills and competencies involving the recognition, comprehension, and management of emotions. This perspective has contributed to a more comprehensive understanding of the role emotions play in interpersonal relationships. Within educational settings, it has provided new insights into learning processes and human development. Emotions directly influence motivation, attention, decision-making, and social interactions within the school environment.

In this regard, the importance of emotions in education cannot be overlooked. Contemporary educational approaches increasingly seek to incorporate emotional and social dimensions into students' development. Such integration is essential, given that emotions play a significant role in how individuals learn, adapt, and develop. Consequently, Emotional Intelligence has become a fundamental component of education, enabling individuals to better understand and manage both their own emotions and those of others (Goleman, 2012).

The studies conducted by Goleman (2012, 2015) propose a theoretical framework structured around a set of essential competencies. Among these competencies, self-awareness stands out as the ability to identify and understand one's own emotions; self-regulation refers to the capacity to manage and control emotions effectively; motivation represents the internal drive that encourages individuals to pursue goals and remain committed to their activities; empathy is defined as the ability to understand and share the feelings and perspectives of others; and social skills encompass the competencies required for effective and harmonious interaction across diverse social contexts.

These dimensions do not operate independently; rather, they function as an interconnected system that plays a crucial role in shaping human behavior across a wide range of contexts and circumstances. The interactions among these competencies influence how individuals respond to different situations. Self-awareness, which may be regarded as a foundational skill, involves not only recognizing one's emotions but also understanding their underlying causes and their effects on thoughts and behaviors (Goleman, 2012, 2015).

This deeper level of emotional understanding is fundamental to personal and emotional growth. Complementarily, self-regulation refers to the ability to manage impulses and maintain emotional balance, particularly when facing challenging or adverse situations. It also encompasses the capacity to address daily difficulties in a constructive and adaptive manner, which is essential for emotional well-being and informed decision-making. Within educational contexts, these competencies contribute significantly to the development of stronger academic trajectories, while also fostering students' self-management skills and autonomy in learning processes (Goleman, 2012, 2015).

Empathy and social skills occupy a central position within Emotional Intelligence studies, as they are closely associated with processes of social interaction and coexistence. Goleman (2015) argues that empathy involves the ability to understand the perspectives, emotions, and needs of others, thereby facilitating the development of collaborative and respectful relationships. Social skills encompass competencies related to communication, conflict resolution, cooperation, and teamwork. Given the increasing diversity of contemporary educational environments, these competencies are essential for fostering inclusive spaces and strengthening pedagogical practices grounded in dialogue, participation, and collective engagement.

In this context, Table 1 presents a synthesis of the principal dimensions of Emotional Intelligence and their contributions to human and educational development, based on the theoretical frameworks discussed in this section.

Table 1. Dimensions of Emotional Intelligence and Their Contributions to Students' Holistic Development

Dimension	Characterization	Contributions to Education
Self-Awareness	Ability to recognize one's own emotions, feelings, and behavioral patterns.	Promotes critical reflection, self-knowledge, and more informed decision-making.
Self-Regulation	Ability to control impulses, manage emotions, and adapt to different situations.	Contributes to discipline, resilience, and the effective management of academic and social challenges.
Empathy	Understanding of others' feelings, perspectives, and needs.	Fosters respect, inclusion, cooperation, and the strengthening of interpersonal relationships.
Social Skills	Competencies related to communication, leadership, collaboration, and conflict resolution.	Encourages teamwork, democratic coexistence, and active participation within the school environment.
Motivation	Disposition to pursue personal and collective goals with persistence and commitment.	Stimulates academic engagement, autonomy, and sustained participation in learning processes.

Source: Prepared by the author based on Goleman (2012, 2015), Brown (2013), Molero et al. (2020), Rodríguez et al. (2021), Mira Galván and Gilar Corbí (2021), and Carvalho and Nunes (2024).

Recent studies have demonstrated that emotional education extends beyond students' personal development, exerting a significant influence on school climate and contributing to the creation of more supportive

learning environments. Carvalho and Nunes (2024), through a scoping review, identified positive outcomes associated with emotional intelligence programs, including improvements in interpersonal relationships, reductions in conflicts, and the strengthening of socio-emotional competencies across all educational levels. These findings suggest that the systematic integration of emotional education into teaching practices may enhance both academic performance and students' civic development.

International studies have reported similar findings. According to the OKAPI program developed by Mira Galván and Gilar Corbí (2021), strategies grounded in cooperative learning, when combined with emotional education, contribute to a more positive classroom climate by fostering respect, collaboration, and a sense of belonging among students. Likewise, the meta-analysis conducted by Molero et al. (2020) identified positive correlations between high levels of Emotional Intelligence and factors related to psychological well-being, academic achievement, and school adjustment. These findings underscore the importance of Emotional Intelligence as an integrative component of contemporary educational processes.

In addition to its influence on students, Emotional Intelligence also plays a crucial role in teaching practice. According to Rodríguez et al. (2021), teachers who demonstrate high levels of Emotional Intelligence are better equipped to manage conflicts, establish positive pedagogical relationships, and promote more participatory learning environments. Similarly, Brown (2013) argues that embracing vulnerability, authenticity, and emotional awareness fosters deeper and healthier human connections. Consequently, the holistic educational approach advocated in contemporary society cannot be restricted to the development of cognitive competencies alone; it must also value the emotional dimensions that underpin democratic coexistence, social responsibility, and comprehensive human development.

3.2 Artificial Intelligence in Education: Applications, Pedagogical Possibilities, and Ethical Challenges

Artificial Intelligence (AI) has become increasingly prominent in educational discussions, particularly due to its capacity to analyze large-scale datasets, identify patterns, and provide personalized responses across diverse learning contexts. Although its foundations are rooted in the advancement of computer science and intelligent systems, its application in education has significantly expanded opportunities for pedagogical mediation, content creation, and student performance monitoring. Consequently, AI is no longer perceived merely as a technological tool but rather as a social phenomenon capable of influencing pedagogical practices, teaching models, and knowledge construction processes (Gomes et al., 2026; Botelho et al., 2025).

The advancement of AI-based technologies has occurred alongside the digitalization of society and the growing interconnectedness and dependence of educational environments on digital technologies. As discussed by Gomes et al. (2024), the widespread dissemination of digital technologies has transformed social participation by expanding access to information and establishing new forms of interaction among teachers, students, and educational institutions. Within the educational sector, this transformation has enabled the adoption of intelligent systems that support content organization, student performance analysis, and the development of instructional strategies better aligned with learners' needs.

One of the most frequently cited applications of AI in education is the personalization of learning. Students differ in their learning paces, challenges, and interests, and intelligent systems can use educational data to identify these characteristics and tailor content and activities accordingly. According to Barbosa et al. (2025), this capability facilitates the development of learning experiences that are more adaptive and responsive to students' individual needs. Similarly, Burak et al. (2025) argue that the implementation of intelligent resources can enhance the accuracy of pedagogical monitoring processes, thereby expanding opportunities for educational intervention throughout different stages of formal schooling.

In light of these possibilities, Table 2 presents a synthesis of the main applications of Artificial Intelligence in education, highlighting pedagogical opportunities as well as the ethical challenges associated with its use in teaching and learning contexts.

Table 2. Applications of Artificial Intelligence in Education: Pedagogical Possibilities and Ethical Challenges

Segue a tradução do quadro, mantendo o padrão de colunas e linhas em formato de tabela. Como o conteúdo está em imagem, preservei a organização visual em três colunas e seis linhas.

AI application **Contributions to the educational process** **Associated challenges**

AI application	Contributions to the educational process	Associated challenges
Learning personalization	Adaptation of contents, activities, and training pathways to students' individual needs.	Risks of algorithmic bias and limitations in interpreting human diversity.

AI application	Contributions to the educational process	Associated challenges
Intelligent tutoring systems	Individualized support for the student and continuous performance monitoring.	Excessive dependence on technology and reduction in human interactions.
Production of educational content	Generation of teaching materials, exercises, summaries, and multimodal resources.	Need to verify the quality, reliability, and authorship of the information produced.
AI-assisted assessment	Performance analysis and identification of learning difficulties.	Issues related to transparency of assessment criteria and the handling of personal data.
Support for teaching work	Assistance in planning, curriculum organization, and pedagogical management.	Need for adequate training for the critical and responsible use of technologies.
Intelligent educational management	Support for institutional decision-making based on data.	Guarantee of security, privacy, and governance of collected information.

Source: Prepared by the author based on Gomes et al. (2026), Gomes et al. (2024), Botelho et al. (2025), Barbosa et al. (2025), Burak et al. (2025), Brasil (2023), and Brasil (2023, Projeto de Lei n.° 2338).

In addition to supporting student learning, AI has increasingly been employed as a tool to assist teachers in their professional activities. Automated systems can facilitate the creation of assignments, the organization of instructional content, the monitoring of performance indicators, and the identification of recurring learning difficulties among students. According to Botelho et al. (2025), such resources can enhance the efficiency of both administrative and pedagogical tasks, enabling educators to dedicate greater attention to knowledge mediation, formative assessment, and the strengthening of pedagogical relationships. However, the authors emphasize that the effective use of these technologies requires adequate training and a critical understanding of their functional limitations.

Alongside the educational opportunities provided by AI, its growing adoption has also stimulated important discussions regarding ethics, transparency, and accountability in the management of information. Gomes et al. (2026) argue that the implementation of intelligent systems in education should be guided by principles that ensure algorithmic explainability, data protection, and the preservation of human autonomy in decision-making processes. In this context, AI should not replace teachers' pedagogical judgment but rather serve as a complementary resource to support educational practices. Issues such as privacy, information security, and algorithmic bias require continuous attention from educational institutions.

In Brazil, the development of regulatory frameworks reflects an increasing concern with the responsible use of digital technologies. The National Digital Education Policy, established by Law No. 14,533/2023, seeks to foster competencies related to digital culture, citizenship, and the responsible use of technology (Brazil, 2023). Furthermore, Bill No. 2,338/2023 establishes guidelines for the development and responsible use of Artificial Intelligence in Brazil, emphasizing transparency, human oversight, rights protection, and risk mitigation (Brazil, 2023). Therefore, the realization of a critical twenty-first-century education requires that the integration of Artificial Intelligence be associated not only with technological innovation but also with the strengthening of ethical, democratic, and socially responsible values.

3.3 Non-Intelligence and Critical Education: Understanding Cognitive Limitations, Misinformation, and Non-Reflective Thinking

Understanding non-intelligence within the educational context requires an analysis that extends beyond the mere absence of formal knowledge or specific intellectual abilities. It refers to a phenomenon associated with the inability or difficulty to engage in reflective processes, critically evaluate information, and recognize one's own cognitive limitations when confronted with the increasing complexity of contemporary informational environments. In this sense, non-intelligence manifests through the mechanical acceptance of content, the automatic reproduction of discourses, and weaknesses in evidence evaluation, all of which may significantly compromise students' civic formation and intellectual autonomy. As argued by Stanovich et al. (2016), human rationality is not determined solely by intelligence as measured through cognitive tests but also by the capacity to critically reflect upon beliefs, judgments, and decisions.

In contemporary digital environments, characterized by the rapid dissemination of information and the widespread use of technological platforms, misinformation has emerged as a central issue in educational debates. The circulation of false, misleading, or decontextualized information encourages simplistic interpretations of reality and reduces opportunities for developing evidence-based analyses. This phenomenon became particularly

evident during the COVID-19 pandemic, demonstrating how the absence of appropriate criteria for information verification can generate significant social, educational, and political consequences. In this regard, Gomes, Holanda Filho, and Costa (2020) emphasize that strengthening educational practices focused on information verification constitutes an effective strategy for combating the spread of misinformation during periods of crisis.

Recent studies have demonstrated that misinformation not only undermines the quality of available information but also directly affects both individual and collective decision-making processes. In many cases, false or manipulated narratives exploit emotions, preexisting beliefs, and automatic cognitive mechanisms, making them particularly influential across diverse social groups. Gomes et al. (2024) argue that misinformation erodes social trust and hinders the development of evidence-based consensus, thereby posing a significant threat to democratic integrity and public debate. Within educational contexts, this reality underscores the importance of fostering competencies related to critical source analysis, evidence-based argumentation, and the rigorous evaluation of the information individuals consume and share.

Consequently, it is essential to examine the factors that encourage uncritical thinking and the unreflective reproduction of information. Among these factors, cognitive biases deserve particular attention, as they represent systematic patterns of judgment that distort the interpretation of reality and may lead to erroneous conclusions. Confirmation bias, for example, leads individuals to prioritize information that supports their preexisting beliefs while disregarding evidence that challenges them. According to Stanovich et al. (2016), the prevalence of such mechanisms indicates that rationality is not an innate characteristic but rather a competency that must be deliberately cultivated through educational practices that promote inquiry, cognitive self-regulation, and metacognitive reflection, thereby reducing the influence of automatic judgments on knowledge construction processes.

Given the relevance of these issues to contemporary education, Table 3 presents a synthesis of the principal factors associated with non-intelligence in educational settings, their manifestations, and the impacts they may generate on educational and formative processes.

Table 3. Factors Associated with Non-Intelligence and Their Impacts on Educational Formation

Factor	Main Characteristics	Impacts on Education
Cognitive Biases	Judgments influenced by prior beliefs and mental shortcuts	Reduced critical thinking and diminished evidence-based analysis
Misinformation	Dissemination of false, manipulated, or decontextualized content	Compromised learning and the construction of reliable knowledge
Non-Reflective Thinking	Automatic acceptance of information without critical evaluation	Weak argumentative skills and limited intellectual autonomy
Uncritical Reproduction of Content	Repetition of ideas without analysis or problematization	Limited creativity and knowledge production
Technological Dependence Without Critical Mediation	Passive consumption of digital content and automated responses	Decreased investigative and reflective capacities
Low Media and Information Literacy	Difficulty evaluating sources and verifying information	Increased vulnerability to informational manipulation and misinformation

Source: Prepared by the authors based on Stanovich et al. (2016), Freire (2021), Kellner and Share (2019), Gomes et al. (2020), Gomes et al. (2024), Pôrto Jr., Andrade, and Souza (2024), and UNESCO (2023).

Overcoming these challenges requires the enhancement of educational practices that foster critical awareness and encourage students' active participation in the construction of knowledge. This empowerment process enables learners to assume a more proactive role in their educational journeys, contributing to the development of their competencies and capabilities. Consequently, teaching methodologies must be adapted to facilitate such meaningful engagement. According to Freire (2021), education has the responsibility to cultivate intellectual curiosity and problematize the multiple realities surrounding individuals, promoting the ability to question, analyze, and critically reflect upon established discourses that are often treated as unquestionable truths. Therefore, teaching involves far more than the transmission of content; it requires the creation of conditions and learning environments that support intellectual autonomy and the development of a critical stance toward the continuous flow of information in contemporary society.

Complementing this perspective, Kellner and Share (2019) emphasize the importance of critical media literacy as an essential instrument for understanding and analyzing the processes through which messages are produced, disseminated, and interpreted across media environments, including digital platforms. This competency benefits both students and educators by strengthening their ability to identify interests, narratives, and discursive strategies embedded in the information they encounter daily. Pôrto Jr., Andrade, and Souza (2024) argue that media education should be integrated into school curricula, as it contributes to the strengthening of citizenship,

encourages democratic participation, and prepares individuals to become critical readers within the diverse informational contexts of contemporary society.

Finally, the rapid pace of innovation in artificial intelligence highlights the urgency of fostering deliberate and critical educational formation. Although these technologies expand access to information and provide valuable pedagogical resources, their use without a critical perspective may encourage the uncritical acceptance of automated responses and the dissemination of unverified or inaccurate content. It is therefore essential to develop discernment in the use of such technologies in order to prevent the spread of misinformation. In this regard, the UNESCO (2023) report emphasizes that the responsible use of artificial intelligence in education must be accompanied by the development of critical thinking, digital ethics, and the capacity to evaluate the quality and reliability of information generated by technological systems. Discussing these issues is fundamental for identifying the educational challenges of the twenty-first century and for consolidating pedagogical practices committed to student autonomy, critical thinking, and social responsibility.

3.4 Articulations among Emotional Intelligence, Artificial Intelligence, and Non-Intelligence in the Construction of Critical Education for the Twenty-First Century

Understanding the contemporary challenges of education requires an integrated articulation of the emotional, technological, and cognitive dimensions that permeate the processes of teaching and learning. Emotional Intelligence, Artificial Intelligence, and the phenomena associated with "non-intelligence" do not operate in isolation; rather, they interact in an interdependent manner, influencing the development of socially responsible and critically engaged individuals. Twenty-first-century education must therefore cultivate the capacity to critically analyze information, manage the emotional complexities of contemporary society, and use technology in an ethical and informed manner. This interconnected perspective strengthens the promotion of intellectual autonomy and active citizenship (Freire, 2021; Goleman, 2012).

The emotional dimension contributes to the development of self-awareness, emotional regulation, empathy, and the competencies required to establish and maintain healthy interpersonal relationships. Research indicates that schools implementing social and emotional learning programs tend to experience more harmonious social interactions, more effective conflict resolution, and more collaborative educational environments (Carvalho & Nunes, 2024; Mira Galvañ & Gilar Cobi, 2021). Emotionally prepared educators are generally more inclusive in their pedagogical practices, which contributes to greater student engagement and improved learning outcomes (Rodriguez et al., 2021). Furthermore, meta-analytical studies have consistently associated socioemotional development with higher levels of school adjustment and academic achievement (Molero et al., 2020; Goleman, 2015).

Simultaneously, Artificial Intelligence has transformed educational environments by enabling personalized learning experiences, automating administrative and instructional tasks, and supporting the creation of digital educational resources. AI systems can identify specific learning needs, adapt instructional content, and expand access to educational opportunities, particularly when considering the diversity of learning profiles present in contemporary classrooms (Gomes et al., 2026; Botelho et al., 2025). In Brazil, the National Digital Education Policy guides the dissemination of digital culture, technological inclusion, and the development of competencies necessary for active citizenship in increasingly technology-mediated societies (Brazil, 2023).

However, the benefits provided by AI do not eliminate the significant challenges associated with its implementation in education. Algorithmic transparency, data security, technological dependency, and the ethical implications of automation require continuous monitoring and critical evaluation. Researchers argue that the responsible use of these technologies depends upon proactive educational practices and public policies capable of ensuring human oversight, equity, and social responsibility (Barbosa et al., 2025; Burak et al., 2025; Gomes et al., 2024). The ongoing legislative debate concerning AI regulation in Brazil further highlights the urgency of institutional mechanisms designed to protect fundamental rights and prevent misuse of emerging technologies (Brazil, 2023).

The concept of "non-intelligence" contributes to this discussion by highlighting factors that weaken critical thinking, including cognitive biases, limitations in decision-making processes, and the uncritical acceptance of information. According to Stanovich, West, and Toplak (2016), rationality extends beyond cognitive capacity; it also involves a willingness to challenge evidence, revise beliefs, and evaluate arguments systematically and critically. Consequently, even individuals with high levels of formal cognitive ability may demonstrate deficiencies in the critical assessment of information and in evidence-based decision-making.

The rapid dissemination of content across digital platforms has intensified the spread of misinformation, manipulative narratives, and decontextualized materials. Misinformation, particularly when combined with insufficient media literacy and limited critical competencies for evaluating digital content, has emerged as a significant threat to both democratic integrity and educational development (Gomes, Holanda Filho, & Costa, 2020; Gomes et al., 2024). In this context, media literacy becomes essential, as it equips individuals with the skills required to verify, interpret, and critically assess messages encountered across diverse communication channels

(Pôrto Jr., Andrade, & Souza, 2024; Kellner & Share, 2019). Furthermore, according to UNESCO (2023), education for the critical use of AI should include competencies related to identifying misinformation, evaluating the reliability of sources, and understanding the limitations of generative systems.

Therefore, the development of critical education in the twenty-first century requires a balanced integration of emotional, digital, and cognitive competencies oriented toward reflective thinking. Emotional Intelligence facilitates a deeper understanding of oneself and others; Artificial Intelligence provides resources that expand learning opportunities; and the examination of cognitive vulnerabilities contributes to the identification of factors that facilitate the uncritical dissemination of information. When understood through an emancipatory educational perspective, these dimensions collectively strengthen intellectual autonomy, social responsibility, and informed democratic participation, aligning with Freirean critical pedagogy (2021) and addressing the challenges arising from contemporary technological transformations.

IV. Final Considerations

This investigation originated from the recognition that twenty-first-century education is situated within a context marked by profound technological, informational, social, and cultural transformations that continuously challenge teaching and learning processes. Consequently, discussions surrounding Emotional Intelligence, Artificial Intelligence, and Non-Intelligence have gained significant relevance in contemporary educational contexts, as these dimensions directly influence human development, knowledge production, the quality of interpersonal interactions, and individuals' capacity for critical analysis in response to the growing complexity of modern society. In light of the expansion of digital technologies, the accelerated dissemination of information, and the challenges posed by misinformation and decision-making processes, it becomes essential to examine how these factors may contribute to an educational model committed to intellectual autonomy, social responsibility, and comprehensive human development.

Based on the findings of this study, it is possible to conclude that the general objective was satisfactorily achieved, as the theoretical foundations of Emotional Intelligence, Artificial Intelligence, and Non-Intelligence were analyzed with regard to their implications for a critical, reflective, and socially responsible education in the twenty-first century. Likewise, all specific objectives were successfully accomplished. The first objective enabled an understanding of the fundamental concepts of Emotional Intelligence and its contribution to the development of socioemotional competencies essential for comprehensive student formation. The second objective facilitated the examination of the potentialities and limitations of Artificial Intelligence within educational contexts, particularly regarding the production, mediation, and democratization of knowledge. The third objective allowed for the exploration of the concept of Non-Intelligence and its manifestations associated with misinformation, cognitive biases, uncritical thinking, and limitations in decision-making processes. Finally, the fourth objective contributed to a deeper understanding of the relationships and interdependencies among Emotional Intelligence, Artificial Intelligence, and Non-Intelligence, highlighting the ways in which each dimension may either contribute to or hinder the construction of critical education in the twenty-first century.

Regarding the discussion of Emotional Intelligence and human development, the findings demonstrated that socioemotional competencies constitute a fundamental component of contemporary education. The ability to recognize emotions, regulate feelings, cultivate empathy, strengthen interpersonal skills, and practice self-regulation contributes to the creation of learning environments that are more collaborative, inclusive, and oriented toward students' holistic development. The theoretical analysis revealed that emotional education is not merely an individual concern but also exerts a direct influence on social interaction, ethical formation, and the development of pedagogical practices committed to citizenship and democratic participation.

With respect to Artificial Intelligence in education, the findings indicated that intelligent technologies have expanded opportunities for personalized learning, access to knowledge, task automation, and support for pedagogical processes. Nevertheless, significant challenges were identified concerning algorithmic transparency, data protection, accountability in technological applications, the preservation of teacher autonomy, and the development of critical digital competencies. The results suggest that the educational use of Artificial Intelligence requires pedagogical mediation capable of integrating technological innovation with ethical responsibility, ensuring that technology is not perceived as a substitute for human reflection or educational guidance.

Concerning the study of Non-Intelligence, the findings demonstrated that phenomena associated with misinformation, cognitive biases, non-reflective thinking, and the uncritical reproduction of content constitute substantial challenges for contemporary education. The research highlighted that access to information alone is insufficient for the construction of knowledge and that strengthening students' analytical, argumentative, and reflective capacities is essential. Critical education therefore plays a crucial role in preparing individuals to evaluate information, identify manipulative discourses, recognize the limitations of their own reasoning, and act responsibly within democratic and digital environments.

The interrelationship among the three dimensions examined revealed that Emotional Intelligence, Artificial Intelligence, and Non-Intelligence should not be understood as isolated phenomena but rather as

interconnected components that directly influence contemporary educational processes. Emotional Intelligence promotes the development of essential human competencies for social interaction and informed decision-making, while Artificial Intelligence expands opportunities for accessing, creating, and disseminating knowledge. Simultaneously, understanding the mechanisms associated with Non-Intelligence provides valuable tools for combating misinformation, cognitive biases, and limitations in reflective thinking. The integration of these dimensions contributes to the development of a more critical, conscious, and socially responsive educational model capable of addressing the demands of the digital age.

In light of the findings obtained, future research should expand empirical investigations dedicated to the intersection of socioemotional competencies, Artificial Intelligence-based technologies, and pedagogical approaches designed to foster critical thinking. It is also important to examine how these dimensions influence different educational levels, sociocultural contexts, and educational modalities, while identifying pedagogical practices capable of integrating emotional education, digital literacy, media literacy, and ethical formation. Comparative international studies, longitudinal research designs, and analyses of educational public policies may further enrich understanding of ongoing transformations and contribute to the development of educational models better suited to the challenges and opportunities of the twenty-first century.

References

[1]. Arantes, T. R. de R. (2025). Documentary research, bibliographic research, and systematic review: Defining aspects and brief considerations. *Cadernos de Estudos Interdisciplinares, 7*(2), e722501. https://doi.org/10.5281/zenodo.15799019

[2]. Barbosa, C. M., et al. (2025). Artificial intelligence in education: Pedagogical, ethical, and legal challenges in the personalization of teaching. *Revista Científica Multidisciplinar Lattice, 2*(3). ISSN 2966-389X. https://doi.org/10.70579/pl.v2i3.73

[3]. Botelho, L., Ferreira, N. S., Santos, L., Gusmão, E. M., Melo, D. S., Silva, C. V. S., Silva, L. S., Siqueira, T. G. S., Ferreira, V. A., Silva, L. A. S., Silva, M. R., Oliveira, C. E. F., Mendes, C. F., & Melo, K. A. P. (2025). Technological innovation: Artificial intelligence in education and transformations in the teaching and learning process. *Caderno Pedagógico, 22*(12), e20540. https://doi.org/10.54033/Cadpedv22n12-071

[4]. Brazil. (2023). *Bill No. 2,338 of 2023: Proposal for the regulation of the development and responsible use of artificial intelligence in Brazil*. Federal Senate. Retrieved August 18, 2025, from https://www25.senado.leg.br/web/atividade/materias/-/materia/157233

[5]. Brazil. (2023). *Law No. 14,533, of January 11, 2023: Establishes the National Digital Education Policy and amends Laws No. 9,394 of December 20, 1996, No. 9,448 of March 14, 1997, No. 10,260 of July 12, 2001, and No. 10,753 of October 30, 2003*. Presidency of the Republic. Retrieved March 9, 2026, from https://www.planalto.gov.br/ccivil_03/_ato2023-2026/2023/lei/l14533.htm

[6]. Brown, B. (2013). *Daring greatly: How the courage to be vulnerable transforms the way we live, love, parent, and lead* (J. Dauster, Trans.). Sextante. (Original work published 2012)

[7]. Burak, A. F., et al. (2025). Artificial intelligence in basic education: Pedagogical potentialities and ethical implications. *Revista Ibero-Americana de Humanidades, Ciências e Educação, 11*(6), 5399–5413. ISSN 1678-0817. https://doi.org/10.69849/revistaft/fa10202504252343

[8]. Carvalho, M. de S., & Nunes, F. C. (2024). Emotional intelligence in formal education: A scoping review. *Contexto & Educação, 39*(121). ISSN 2179-1309. https://doi.org/10.21527/2179-1309.2024.121.15485

[9]. Cavalcante, L. T. C., & Oliveira, A. A. S. de. (2020). Bibliographic review methods in scientific studies. *Psicologia em Revista, 26*(1), 82–100. ISSN 1677-1168. https://doi.org/10.5752/P.1678-9563.2020v26n1p82-100

[10]. Creswell, J. W., & Creswell, J. D. (2018). *Research design: Qualitative, quantitative, and mixed methods approaches* (5th ed.). Sage Publications. ISBN 978-1506386706.

[11]. Freire, P. (2021). *Pedagogy of autonomy: Knowledge necessary for educational practice* (79th ed.). Paz e Terra.

[12]. Goleman, D. (2012). *Emotional intelligence: Why it can matter more than IQ* (M. Santarrita, Trans.). Objetiva. (Original work published 1995)

[13]. Goleman, D. (2015). *Working with emotional intelligence* (M. Santarrita, Trans.). Objetiva. (Original work published 1998)

[14]. Gomes, R. L. R., et al. (2026). Artificial intelligence in the pedagogical process: Technological innovation, transparency, limits, and responsibility. *IOSR Journal of Research & Method in Education, 16*(2, Series 1), 79–87. e-ISSN 2320-7388; p-ISSN 2320-737X. https://doi.org/10.9790/7388-1602017987

[15]. Gomes, R. L. R., et al. (2024). Digitalization and participation in education: Opportunities, challenges, and initiatives in the digital world. *IOSR Journal of Humanities and Social Science, 29*(10, Series 1), 18–26. e-ISSN 2279-0837. https://doi.org/10.9790/0837-2910011826

[16]. Gomes, R. L. R., et al. (2024). Disinformation and threats to democratic integrity: Social, business, and political contexts. *International Journal of Engineering Research and Development, 20*(8), 488–495. e-ISSN 2278-067X.

[17]. Gomes, R. L. R., Holanda Filho, I. de O., & Costa, E. F. da. (2020). Educational suggestions and combating disinformation during the COVID-19 pandemic period. *International Journal of Latest Research in Humanities and Social Science, 3*(8), 19–29.

[18]. Kellner, D., & Share, J. (2019). *The critical media literacy guide: Engaging media and transforming education*. Brill.

[19]. Mira Galvañ, M. J., & Gilar Cobi, R. (2021). OKAPI, emotional education and classroom climate improvement program based on cooperative learning: Design, implementation, and evaluation. *Sustainability, 13*(22), 12559. https://doi.org/10.3390/su132212559

[20]. Molero, P. P., Zurita-Ortega, F., Chacón-Cuberos, R., Castro-Sanchéz, M., Ramírez-Granizo, I., & Valero, G. G. (2020). Emotional intelligence in the educational field: A meta-analysis. *Anales de Psicología, 36*, 84–91. Retrieved April 28, 2026, from https://revistas.um.es/analesps/article/view/345901

[21]. Pôrto Jr., G., Andrade, L. A. B., & Souza, D. de M. (Eds.). (2024). *Teaching, communication, and disinformation: Vol. 2. Literacy and media education*. Observatório Edições. ISBN 978-65-981820-7-6.

[22]. Rodriguez, C. C., Leal, X. P., & Farías, C. S. (2021). Emotionally intelligent teachers: The importance of emotional intelligence for the implementation of emotional education in classroom pedagogical practice. *Estudios Pedagógicos, 47*(1). Retrieved June 2026, from https://www.scielo.cl/scielo.php?script=sci_arttext&pid=S0718-07052021000100219

[23]. Stanovich, K. E., West, R. F., & Toplak, M. E. (2016). *The rationality quotient: Toward a test of rational thinking*. MIT Press.

[24]. UNESCO. (2023). *Guidance for generative AI in education and research*. UNESCO.