THINKING OF OTHERNESS IN THE ERA OF AI. FOR A PEDAGOGY OF EMOTIONAL INTELLIGENCE IN FORMAL CONTEXTS

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ABSTRACT

The paper investigates whether and to what extent AI-based devices can support or simulate certain aspects of the educational relationship, with particular reference to the emotional education of children and adolescents. Starting from the contemporary crisis of human connections, the weakening of emotional awareness, and the growing exposure of younger generations to intelligent digital environments, the contribution reflects on the relationship between emotional intelligence, empathy, and education.Situated within both classical and contemporary pedagogical frameworks, the paper critically examines both the risks of artificialization and the colonization of human experience, as well as the potential educational resources offered by the digital environment. It underscores the necessity of transcending any technophobia, in order to critically question whether and how intelligent machines can engage in formal educational contexts with practices of recognizing others, self-regulation, compassion, and the design of an authentically human existence.

KEYWORDS

artificial intelligence; emotional education; educational relationship; young generations; human experience.

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1. Introduction: Complexity and 'Artificiality' from a Pedagogical Perspective

The current call for papers undoubtedly addresses wide-ranging themes from which pedagogy must draw inspiration in order to redefine its core constructs and fundamental concepts. These are centred both on the concrete processes of educating, training, and teaching (which are deemed *concrete* precisely because they are interpreted and 'carried out' within specific spatial and temporal contexts) and on their real actors and protagonists. Reflection on Artificial Intelligence and, more generally, on the Fourth Industrial Revolution falls first and foremost within the paradigm of *complexity* (ontic, even before epistemic) that human knowledge, from every possible angle, has long been called upon to grapple with. Foreshadowed by the artistic and literary sensibilities of the last century – under the premise that "art speaks first, says it better, and says it to everyone" – this shift was conceptualized within various epistemological frameworks by figures ranging from Bachelard and Morin to Mauro Ceruti. Writing in the daily newspaper *Corriere della Sera*, Paolo Benanti and Sebastiano Maffettone pointed out that postmodernism, "on closer reflection, […] has called into question the very legitimacy of knowledge in the ways and forms in which it had been handed down. The technological revolution inherent in it was the digital one, that, from an intellectual standpoint, predates by a long way the moment when we began to engage with it in practice. Von Neumann's theory of automata and Wiener's cybernetics in the 1940s are already clear evidence thereof" (Benanti, Maffettone, 2026). However, no discipline has perhaps been better able to experience these changes first-hand than general pedagogy. Following the gradual establishment of the educational sciences during the twentieth century, pedagogy has, on the one hand, increasingly aligned its approach within the epistemological framework of anthropological, psychological, and sociological knowledge. On the other hand – in

a manner that is only apparently paradoxical – it has consciously embarked, within the boundaries of its own 'scientific' criteria, on a powerfully critical and 'deconstructive' inquiry (one that is both 'a departure' and 'a recovery'). This has resulted in the development of highly significant and fruitful theoretical models – from pedagogical problematicism to hermeneutic pedagogy and the various phenomenologies of education, to name but a few – aimed at understanding the issues raised by the contemporary world. If, as Franco Cambi has stated, amongst the structural events that have shaped the "face of complexity (and indeed of contradiction)" of the twentieth century is the irresistible rise of technology ["which has become the new Moloch of the present day", since it "dominates our everyday lives, penetrates our consciousness (through the media), governs all of social life and has given rise to a new mindset, which feeds on these human prostheses and moulds itself upon them, outlining the picture of an Administered World and a veritable 'iron cage'": Cambi, 2012, p. 6; p. 7], this "event" has now acquired a significance that can no longer be ignored. This is especially true in light of the 'fundamental difference' (though increasingly blurred, at least in appearance) between human and 'artificial' intelligence: a crucial juncture that scholars feel they 'must' address and explore, often to satisfy a deep sense of loyalty to a *certain* idea of humanity and human relationships. Truth be told, without necessarily invoking Umberto Eco and his distinction between "apocalyptic" and "integrated" – or even the less obvious approach of the 'nonpolitical' Thomas Mann and the distinction he drew between a disenchanted, melancholic 'aristocracy of the spirit' and an indistinct, superficial yet serene populace, incapable of comprehending the 'unhappy consciousness' of complexity – 'algorithmic reason', despite its genuinely epoch-making and decisive potential, poses significant problems on both an ethical and pedagogical level. In his work *Artificial Agency: Explorations of a Post-AI Culture*, Luciano Floridi refers to AI as an 'Artificial Agency' rather than as true intelligence. This conceptualization raises a series of unavoidable questions for

educators to reflect on. Consider, for instance: the exacerbation of biases (a problem known as BIBO, 'bias in, bias out') and the social prejudices disseminated without any form of critical scrutiny; issues concerning privacy and the protection of personal data, which are subject to incessant and potentially unmanageable transformations (as Benanti and Maffettone noted in the *Corriere*, in an article published shortly before the one we cited earlier, *La nuova partita del potere*: "the balance of power has shifted: in the digital realm, the levers are not in the hands of those who own the data, but of those who transform it", 2025); the precise determination of accountability in the event of malfunctions or damage caused by AI systems, which must be viewed in terms of human, environmental, and economic sustainability; the protection of copyright and intellectual property; the future of content in terms of its authenticity, significance, and originality; so-called "hypersuasion" (that is, the 'hyper-persuasive' capacity that AI exerts, both explicitly and implicitly, on our thoughts and actions); and finally – what interests us most – the 'democratisation' of risks and the 'globalisation' of issues that are redefining the labour market, education systems, and social relations (2025, pp. 23-33).

From a genuinely pedagogical perspective, as far as we are concerned here, it is important to understand how and to what extent the Fourth Industrial Revolution is impacting the 'cultivation' and intensity of interpersonal and intergenerational relationships, across multiple levels of analysis (cognitive, emotional, affective, spiritual, etc.). This impact may lead us to speak, as many do, of an inevitable 'crisis' in relationships (in which we are already immersed) or, with greater critical caution, of a challenge that is worth tackling with patience and critical attention before it is too late. This contribution is therefore explicitly conceived as a conceptual paper and a theoretical-critical essay, not as an empirical study. Two questions guide the discussion: firstly, which components of emotional education can be responsibly

supported by AI-based tools, and which necessarily require the embodied, reciprocal, and accountable presence of an educator? Secondly, how should formal educational settings distinguish tools that facilitate emotional verbalisation and reflection from systems that infer or classify internal states? Its added value relative to Strollo and Buccini (2025) lies in proposing a pedagogical division of labour among assistive functions, non-delegable relational responsibilities, and emotion-inference practices that are scientifically fragile or legally prohibited.

2. Young generations, emotional intelligence and affective awareness: the role of the adult educator

Young people spend their lives in today's contexts that are increasingly conflictual without having a clear awareness of what characterizes the actions of the individual, of how actions and reactions towards themselves and towards others must be structured in order for them to be defined as human. The quality of human agency, which includes the person's ability to act freely and creatively with reference to his or her own desires and experiences and feelings, seems to be scarcely taken into consideration. Young people’s difficult process of identity development is reflected in their emotional lives, which are inevitably shaped by the uncertainty characterizing the present, the general fragility of community ties, and a lack of empathy. All this is amplified by the general emotional uncertainty that belongs specifically to the pre- and adolescent age. For these reasons, today it is recognized that education cannot fail to include educating to emotional intelligence, conceived as taking care of the person himself to facilitate his or her realization: "Educating young people about feelings does not mean teaching them to deny drives, to keep quiet about emotions, to 'not think about them', to repress those states of mind that can 'hinder' the correct use of reason. The educational task is manifested in accompanying young people to reserve a significant role for emotional life in their existence, assuming responsibility for it" (Iori, 2012, p. 26).

The growing presence of intelligent systems makes adult responsibility in emotional education more, rather than less, important. Some young people may use AI tools, including conversational systems, to seek information, rehearse difficult conversations, or articulate intimate concerns. Such uses should not be interpreted as proof that human relationships have disappeared; they invite educators and institutions to examine the availability, visibility, and quality of adult listening.

In general, we are witnessing the transition from what was previously an "embodied relationship" to an interaction mediated by the intelligent machine. Digital affectivity has been expressed through messages, images, "likes", which may supplement, reshape, or sometimes displace conversations and face-to-face expressions of feeling. But a further threshold is crossed when users entrust affective conversations to systems whose responses can appear relational by entrusting one's affective conversations to the intelligent machine which, in simulated empathy, advises, makes suggestions, imposes its own rules (Gallese, 2026, p. 151).

Conversational systems may use anthropomorphic characters and empathic-seeming language that encourage trust and disclosure. This does not mean that young users are inevitably passive or deceived. Nevertheless, the asymmetry of the interaction deserves attention: users may disclose personal histories, whereas the system generates statistically patterned responses and may operate within data-driven commercial models. The relevant risks concern privacy, persuasive design, inaccurate guidance, and the possibility that repeated frictionless interaction may alter expectations of human relationships; these are risks to be investigated rather than deterministic outcomes (Scorza, 2025).

Young people may experience emotional chatbots and voice assistants as available, non-judgemental interlocutors to whom they can entrust questions, experiences, discomfort, and hopes. At the same time, many recognise that such systems do not share emotions or possess consciousness. Their continued use can reflect

convenience, curiosity, a wish to rehearse disclosure, or gaps in accessible support; it should not automatically be interpreted as evidence that authentic relationships are absent. The educational task is to make the difference between simulated responsiveness and reciprocal human understanding explicit, while ensuring that trustworthy adults are genuinely available.

It therefore becomes essential to reaffirm the presence and educational responsibility of adults towards young people. It is not enough to limit ourselves to seeing social networks or technology as the cause of young people's lack of emotional intelligence and affective maturity (Luna, 2025). As adult educators, it is necessary to demonstrate one's presence to the Alpha generation, respond to the need to listen to children and young people, setting up a non-judgmental dialogue and developing emotional intelligence and critical thinking at the same time. In this way, emotional machines can be brought back to tools with limited space for action, at the service of the 'real' emotional-effective educational relationship, in the awareness that "in the digital environment, affectivity does not dissolve: it reconfigures" (Gallese, 2026, p. 147). Educating emotional intelligence therefore consists, first of all, in making young people aware that, as Galimberti (2023) states, technology cannot succeed in undermining man's "meditating thought", reducing his space for personal freedom, original expressiveness. Also because, "when people interact with the chatbot, which simulates a therapist by simply repeating the interlocutor's words and adding what a limited number of preset rules establish responds, they tend to interpret the program's responses as the result of a deep understanding and real empathy" (Scorza, 2025, p. 24). In empathic relationships, 'others' must not dematerialize by taking on the role of the virtual interlocutor of the software. Such a drift of the human makes it impossible to refer to an ethics of human intention and responsibility classically understood, as everything is swallowed up by technical action and the decision of Emotion AI, in a dissolution of human ingenuity. What critical pedagogy should take charge of in developing the

paths of education to emotional-affective intelligence is to make young people reflect on whether it is possible to delegate their life to the intelligent machine, to the algorithmic processing of feelings and affects, but at the same time offer models of adult educators capable of facilitating the elaboration of the world-of-life in the Husserlian sense.

3. Children's emotional education between the virtual and reality

The call for a critical pedagogical approach that supports emotional education from early childhood is more urgent than ever, given the range of current digital contexts that offer innovative experiences in play, learning and socialisation, but which are also capable of interfering with – and even altering – emotional development during childhood. One need only consider certain immersive gaming experiences that simulate battles and conflicts, from which players struggle to emerge and detach themselves in order to return to living in and recognising reality; similarly, one might consider, by way of example, online challenges that often replace face-to-face interactions.

Socialisation itself, therefore, is mediated and media-driven, and may, in some circumstances, be associated with isolation or anxiety; these associations vary across activities, individuals, and contexts and do not by themselves establish causation.

It should not be overlooked, however, that certain educational applications – known as Affective Computing – have the potential to enhance and improve learning by using machine learning algorithms to tailor learning experiences to users' emotional responses (Gopika, Sriram, and Balakarthik, 2026). Tools such as webcams and AI-based systems detect facial movements and subtle body movements, tone of voice, rhythm and response times, the pressure applied to keyboard keys, or decisive or hesitant mouse movements to gauge levels of concentration, frustration or boredom, and provide adaptive responses: for

example, simplified exercises, messages of encouragement, and suggestions for taking breaks to prevent emotional overload (Vistorte et al., 2024).

These tools may offer prompts for exploring emotional vocabulary or practising specific responses, but their capacity to foster introspection, empathy, or stress management remains a potentiality that requires age-sensitive empirical evaluation. Such outcomes should not be inferred from engagement alone.

However, it is essential that the use of such technologies is accompanied by appropriate adult guidance, which supports children in understanding content and deciphering meanings, so that the importance of human interactions and relationships is not lost sight of.

In this regard, Jerome Bruner's work (1996) highlights how language and storytelling are powerful tools for emotional and cognitive development, suggesting that the integration of stories and emotional discussions into digital experiences can enrich the learning process.

Digital storytelling practices (Lambert, 2013), which are becoming increasingly widespread in nursery schools, offer one possible combination of critical-narrative thinking exercises and digital technologies that engage the senses. Digital storytelling therefore may provide one avenue for the emotional education of children, facilitating their identification with the characters through visual and auditory stimuli, amongst others.

In this way, the acquisition and development of social skills such as empathy and assertiveness may be supported when the activity is followed by teacher-guided discussion, enabling individuals to understand and acknowledge the emotions of others and to freely express their own.

As early as 1990, Peter Salovey and John D. Mayer put forward the first theory of emotional intelligence, defining it as the ability to recognise and understand emotions: a type of intelligence that can be measured through specific tests and is fundamental to establishing positive social relationships.

For this reason, it is essential that, from the earliest stages of life, a secure attachment bond is established between mother and child – that is, an emotional connection that alleviates the infant's separation anxiety and lays the foundations for the development of a secure, communicative and empathetic sense of self (Bowlby, 1982).

Emotional education should be an educational priority in all learning contexts, not only because of its impact on individual well-being, but also because of its role in promoting an inclusive and collaborative learning environment.

It is therefore essential that educators and parents work together to ensure that boys and girls develop a solid sense of self-awareness and emotional awareness. Such an approach enables children to recognise and validate all the emotions they experience, regardless of whether they are positive or negative, and thus to regulate their own emotions when interacting with others who are recognised as having the same emotional autonomy (Goleman, 1999).

This capacity for emotional regulation gives rise to further abilities, such as reading the context and providing adaptive emotional responses; modulating one's own emotional reactions to the behaviour of others; and mediating and negotiating in the event of conflict.

In carefully designed and supervised contexts, some digital tools may provide predictable scenarios, visual supports, or repeated practice that could be useful for particular neurodivergent learners. Such benefits cannot be presumed from a diagnostic category and require individualised evaluation, accessibility, data protection, and the involvement of educators and relevant professionals.

However, we must not overlook the specific concerns relating to children who interact with chatbots and voice assistants that simulate empathy by using welcoming language: this may encourage a relational attribution in children, and lead some children to attribute human characteristics to systems that lack consciousness or intentionality.

As Strollo and Buccini argue, certain technologies ‘capable of emotional mimicry can stimulate certain primary socio-emotional skills in children, but the transition to genuine cognitive empathy remains a challenge both technically and educationally’ (Strollo, Buccini, 2025, p. 85).

It can therefore be concluded that ‘AI does not generate empathy, but it can facilitate its learning, simulation and practice, particularly in structured educational or therapeutic contexts; conversely, if used without adequate reflection, it risks flattening the complexity of emotional and relational experience’ (ibid.).

4. Onlife Youth: Emotional Educational Challenges for Adolescents in the Age of AI

The emergence of artificial intelligence as a structuring force in everyday social life has inaugurated what Luciano Floridi has termed the “onlife” condition (Floridi, 2015): a mode of existence in which the boundaries separating offline and online experience are no longer meaningfully distinct. For contemporary adolescents, this condition is not a metaphor but a developmental reality: algorithmic systems mediate attention, affiliation, and identity formation at precisely the moment when young people are most neurologically and psychologically vulnerable to social influence. In this context, emotional education faces challenges of unprecedented complexity: challenges that are not merely pedagogical but fundamentally socio-anthropological in character.

To appreciate the depth of those challenges, one must first consider the neurobiological architecture of adolescence itself (Barone, 2009). The limbic system, responsible for emotional reactivity and reward-seeking, matures earlier than the prefrontal cortex, which governs impulse regulation, long-term planning, and perspective-taking. This temporal asymmetry renders adolescents acutely sensitive to social evaluation and particularly susceptible to mood volatility.

Algorithmically curated platforms are structurally calibrated to exploit precisely these propensities: engagement-driven systems privilege high-arousal content, visibility metrics externalise self-worth as a quantifiable variable, and rapid micro-feedback loops intensify affective oscillation. The environment, in other words, is not merely indifferent to adolescent development but it may be poorly aligned with some developmental needs. The consequences of this misalignment are visible in what has emerged as the defining paradox of connected adolescent life. Young people today are arguably more socially visible than any previous generation: they maintain continuous digital presence, produce and circulate self-representations across multiple platforms, and are embedded in networks of real-time communication. However, recent studies and research have examined trends of loneliness, anxiety, and subjective social exclusion among precisely this cohort (Haidt, 2024). The recent Italian report “Atlante dell’infanzia (a rischio)” captures the paradox with particular clarity (Save the Children, 2025): adolescents frequently describe themselves as unheard, present in highly connected environments yet deprived of genuine attentiveness. This experience of connected isolation is partially illuminated by the concept of “context collapse” (boyd, 2014): in digital environments, audiences from radically different relational contexts collapse into a single, undifferentiated public. Adolescents, whose identity work depends on the contextual modulation of self-presentation, must navigate an environment that systematically undermines such modulation. The resulting performance of self is simultaneously hyper-visible and strategically opaque, optimised for algorithmic legibility rather than authentic expression. Compounding this is the phenomenon of parasocial comparison: algorithmically surfaced content routinely exposes adolescents to curated representations of peers' lives, generating asymmetric social comparison in which others appear more socially successful, physically appealing, and emotionally regulated than oneself. It is against this backdrop that the increasing appeal of AI as an affective interlocutor must be understood. AI’s

entry into the affective and emotional sphere marks a further turning point, highlighting a surprising behavioral pattern: available survey evidence indicates that some adolescents report turning to AI systems when they feel sad, anxious, or face consequential life choices. This pattern may signal gaps in adult availability or institutional responsiveness, while also indicating that adolescents perceive AI as low-friction, non-judgmental, and "always on". Conversational AI systems are therefore increasingly sought out by young people as partners for emotional processing, social rehearsal, and identity exploration — and their appeal is intelligible: they offer availability, consistency, and the absence of judgement. While such systems may offer genuine utility in specific contexts, their widespread adoption as primary or supplementary sources of relational support raises substantive concerns for emotional development. Human emotional development is fundamentally relational and co-constructed: it depends on the experience of being genuinely witnessed by another consciousness capable of uncertainty, misattunement, and repair. AI systems, however sophisticated, simulate attunement without instantiating it. Their responses are statistically optimised for user satisfaction rather than grounded in authentic intersubjective encounter. Extended reliance on AI interlocutors may habituate young people to a form of affective exchange characterised by unconditional availability, absence of conflict, and algorithmic responsiveness — conditions that differ structurally from the friction and reciprocity inherent in human relationships (Mariani, 2021). A pedagogically relevant possibility is not that AI necessarily replaces human connection, but that repeated use may recalibrate expectations of what connection should feel like.

The task of emotional education, then, is to hold open the spaces that this recalibration threatens to close. Its central challenge is not technological but socio-anthropological: it concerns what it means to learn to be human, to bear uncertainty, to sustain care, to develop the capacity for genuine encounter in

environments increasingly optimized for something else (Cambi, Pinto Minerva, 2023). In this sense, pedagogy is called to promote enabling spaces where that learning remains possible: spaces characterized by human presence, genuine attentiveness, and the productive friction of authentic relationship. What adolescents are asking for, first and above all, is to be heard without filters, without algorithms, without mediation. That listening is not a supplement to emotional education: it is its foundation.

5. In the belly of the algorithm. The mechanical Turk and the infancy of Artificial Intelligence

In 1769, at the court of Maria Theresa of Austria, Wolfgang von Kempelen presented an automaton destined to trouble the European imagination for a long time to come: a figure dressed in Oriental attire, seated before a chessboard, apparently capable of challenging and defeating players of flesh and blood. The "Mechanical Turk" passed through the salons of the Enlightenment as both an enigma and an unusual spectacle, precisely in a century that had made reason the founding principle of humanity (Standage, 2003). The machine seemed, in fact, to possess that faculty which, more than any other, grounded human pride. Only later was it discovered that a man was hidden inside the device: a real chess player, concealed in the belly of the apparatus. The epistemological core of the anecdote unravels the condition around which our pedagogical reflection turns: when a civilization imagines an intelligent machine, does it project into it a technical dream, or a question about itself? In more compelling terms: what do we mean by intelligence when we believe we have reproduced it? What idea of humanity do we preserve, or lose, at the very moment when we transfer it into a device? The Mechanical Turk was seductive because it appeared to think; at the same time, it was unsettling because it compelled observers to question thought beyond the surface of performance. Algorithmic civilization inherits this posture and radicalizes

it: today, the human being is no longer hidden inside the machine as a trick or theatrical illusion, but is inscribed within it, opaquely, in the form of data, models, classifications, design decisions, economic interests, cultural hierarchies, and social expectations. Intelligent machines, therefore, call for a profound revision of the categories through which we think about education, relationship, learning, and affectivity. They converse, respond, predict, recommend, personalize; they simulate proximity, produce texts, recognize regularities, and organize environments of experience. Their effectiveness lies in their capacity to inhabit the subtle space of everyday life, sometimes assuming the form of an available, patient, adaptive, apparently understanding interlocutor. An educational gesture adequate to the present must be rooted in the critical capacity to interrogate the cultural forms produced by devices and the imaginary of artificial intelligence: its grammar, its promises, its omissions. It must ask what kind of subject is presupposed by systems that learn from behavior, anticipate desires, and orient attention. The issue becomes particularly delicate when the discourse turns to the emotional education of children and adolescents. Emotions constitute an original form of intelligence of the world: they indicate what matters, reveal dependencies and vulnerabilities, expose the subject to the value of the other, and render visible the web of desires, fears, wounds, and hopes through which each person inhabits experience. They are imbued with judgment, imagination, and evaluation, and they participate decisively in moral and political life (Nussbaum, 2001), capable of transforming impulse into speech, into logos, and into bond. Algorithmic technologies can offer significant tools in this domain. They can foster practices of self-knowledge, support personalized pathways, make exercises in emotional reflection more accessible, and help detect signs of distress that might otherwise remain dispersed. They can assist teachers and educators in reading complex needs, especially in contexts marked by increasing fragility and often insufficient institutional resources. Yet their capacity to simulate listening and understanding introduces a problematic

threshold that pedagogy should monitor with particular rigor. An artificial system can recognize linguistic patterns, associate facial expressions with affective categories, suggest calibrated responses, and produce a formally persuasive lexicon of empathy. Yet it remains external to educational exposure: the risk of being implicated by the encounter, the reciprocal transformation generated by presence, the responsibility of answering for oneself before someone else. Paradoxically, one might say that the algorithm educates even when it does not present itself as educational. It educates the gaze, because it arranges priorities and visibility; it educates desire, because it reinforces preferences and orients choices; it educates time, because it accustoms us to instantaneous response; it educates judgment, because it tends to make what has been ordered by a procedure appear natural. In school contexts, this organizing power can become precious, provided it is placed within a framework of pedagogical intentionality. When, by contrast, the computational criterion assumes command over formative experience, the very substance of the category of the "educational" risks being compromised: a category that perhaps consists in recovering a form of thought capable of connecting, contextualizing, and recomposing what fragmented knowledge tends to separate (Morin, 1999). The decisive point concerns the very meaning of educating in the age of intelligent machines. A school that were to pursue machines on the terrain of speed, informational accumulation, and combinatory exactitude would lose its highest vocation, since education preserves less conspicuous yet more decisive faculties: judgment, deliberation (Berlin, 2002), moral imagination, the capacity to inhabit the conflict among plural goods, and attention to what does not produce immediate utility (Ordine, 2013).

6. Between Human and Digital: Emotional Intelligence, Empathy, and Training in Formal Contexts

The focus on emotional aspects in educational processes is today one of the most significant areas of focus in contemporary pedagogical thought. Since the 1990s, the Italian tradition has highlighted with particular attention the constitutive nature of emotions in educational processes, recognising them as structural elements of human experience rather than simply affective dynamics (Cambi, 1996; Mortari, 2002; Bellingreri, 2005; Iori, 2012).

The emotional dimension emerges as a factor capable of guiding, supporting or obstacles learning, influencing motivation, self-perception and the quality of a child's well-being during their development. This recognition is intertwined with research in the field of neuroscience, which has shown that emotional and cognitive processes are deeply interdependent and in constant interaction, to the extent that they constitute an inseparable functional unit of human intelligence (Damasio, 1995). Far from being a pre-rational remnant, emotions contribute to the construction of meaning in the experiences lived by the individual, guide attentional processes, modulate memory and play a part in shaping their personal identity. (Piaget, 1936; Gardner, 1983; Sartre, 2004).

The perspective opened by the models of Salovey and Mayer (1990) and the subsequent work of Goleman (1995) presents emotional intelligence as a construct of significant pedagogical importance, in that it is recognised as a strategic competence that enables one to recognise, interpret and regulate one's own and others' emotional experiences. Together with empathy takes the form, within the school context, of a relational mechanism of primary importance: a disposition that enables one to acknowledge another's experience, attune to their emotional states and build a relational climate of trust. The convergence of emotional and empathic skills thus becomes a decisive factor in promoting the overall quality of education within formal settings, restoring the centrality of the relational dimension as the generative core of educational processes.

The ability to understand another person's experience without superimposing one's own upon it is the prerequisite for an educational relationship founded on recognition, listening and responsiveness. Empathy enables the teacher to adapt their teaching approach, to identify pupils' implicit needs and to support inclusive processes, thereby contributing to the creation of a positive classroom atmosphere. Today, the emerging digital technologies, as tools for fostering social and emotional skills, introduce a further level of complexity and opportunity. The responsible use of technology in school teaching can, in fact, support emotional awareness and enhance social and interpersonal skills, particularly when the teacher, drawing on their knowledge of the context, adapts digital methods and tools to the specific needs of the class.

Affective Computing is playing an increasingly significant role; this field of research was pioneered by Picard (1997) and is now expanding rapidly. Affective Computing aims to develop algorithmic systems (Emotion AI) designed to detect signals, infer or classify putative emotional states, or simulate affective responses through voice, text, facial expressions or behavioural patterns, with the stated aim of responding adaptively; this aim does not establish that inner states are reliably known or that well-being is improved. Its applications are well established in sectors such as the analysis of social signals, interactive games, health and safety, and are also finding promising ground in the field of compensatory educational technologies (Landowska, 2013). In educational settings, such systems have been proposed to infer pupils' emotions, provide positive reinforcement, support independent task completion and may support the practice of social-emotional skills that are fundamental to meaningful learning. In safe, purpose-built environments, they enable pupils to practise specific skills through challenging and playful scenarios, with possible effects on engagement and motivation that require empirical verification (Ong et al., 2011).

Affective computing, Emotion AI, simulated empathy, and artificial empathy are related but non-equivalent concepts. Affective computing names the interdisciplinary field concerned with systems that recognise, model, express, or respond to affective phenomena (Picard, 1997). Emotion AI is a broader label for applications that detect, predict, classify, or respond to affective signals (McStay, 2018). Simulated empathy refers to outputs designed to appear understanding; artificial empathy is the stronger and contested claim that a system reproduces selected empathic functions (Paiva et al., 2017). Neither expression demonstrates felt experience, moral concern, or responsibility (Montemayor et al., 2022).

There is a need to move beyond any technophobia (Rivoltella, 2025), not in order to uncritically accept the promises of innovation, but to rigorously examine whether and how intelligent machines can, within structured educational contexts, facilitate those practices of recognising others, self-control, compassion and the shaping of an authentically human existence which constitute the indispensable core of education. The question concerns not only the technical capacity of systems to detect emotional states, but also the possibility of understanding whether such devices can be integrated into an educational framework based on relationships, responsibility and care. The challenge lies in discerning which aspects of emotional experience can be supported by intelligent technologies and which, on the other hand, require the irreplaceable presence of the educator, their ability to interpret complex situations, to embrace the unexpected, and to generate meaning through interaction. The integration of emotional intelligence, empathy and educational technologies opens innovative scenarios, but at the same time requires ethical and pedagogical reflection capable of preserving the centrality of the individual and the student-teacher relationship. More specifically, AI may assist low-stakes and revisable activities such as emotional vocabulary building, learner-authored reflection, fictional scenario generation, translation, accessibility, and rehearsal. Contextual interpretation, safeguarding, ethical judgement, conflict mediation,

relational repair, and responsibility for consequential decisions remain non-delegable functions of the educator.

These distinctions also have legal and epistemic consequences. Article 5(1)(f) of Regulation (EU) 2024/1689 prohibits the placing on the market, putting into service for that purpose, or use of AI systems intended to infer emotions in workplaces and educational institutions, except for medical or safety reasons. Recital 44 identifies limited reliability, lack of specificity, and limited generalisability, while research also documents cultural variation in emotion recognition (Elfenbein & Ambady, 2002). Systems that infer internal states from biometric or behavioural signals must therefore be distinguished from tools that invite learners to verbalise, narrate, or reflect on emotions without automatically classifying them.

In this regard, it is worth noting that technology cannot replace the complexity of the educational relationship, but it can increase its impact by supporting teachers in creating inclusive, motivating and wellbeing-focused learning environments. The contemporary pedagogical challenge lies in avoiding an excessive trivialisation (Cottini, 2000) of the process of empathic understanding practised by the teacher. Emotional AI cannot replace the presence of an adult, but it highlights even more clearly the need for teachers who are professional and empathetic, capable of designing fully human educational programmes (Simeone, 2002).

The presence of these technologies brings one fundamental question back to the fore: what does it really mean to enter into an empathic relationship (Rogers, 1975). It is not a matter of algorithmic calculation or standardised recognition, but movement towards the other, a shared construction of meaning. Education as a space for encounter and transformation, cannot be reduced to the interpretation of signals; it lives on listening, interpretation and reciprocity.

7. The design of an authentically human existence: practices for the recognition of the other

The advent of the era of algorithmic reproducibility and the progressive immersion of younger generations into the onlife condition urges pedagogical reflection to redefine the epistemological boundaries of what can be considered an authentically human existence. As highlighted in the previous sections, devices based on Emotional Artificial Intelligence (EAI) are increasingly present in everyday spaces by simulating friction-free affective proximity and preprogrammed artificial empathy (Scorza, 2025; Strollo & Buccini, 2025). Consequently, the original task of education today lies in safeguarding the delicate threshold of subjectification. To design the human means, first and foremost, to remove the individual from the capitalistic logic of pure performance, algorithmic optimization, and information consumption (brain rot), in order to bring them back to the constitutive dimension of intersubjective relationships, understood in a Husserlian sense as an ethical space of exposure, vulnerability, and interdependence. Against the dematerialization of social bonds, critical pedagogy must champion the recovery of collective, live rituals and absolute bodily presence (Mariani, 2021); these shared, analog experiences act as a primary bulwark against the paralyzing overthinking induced by digital spaces. In this scenario, technology must be neither demonized through sterile technophobic postures nor passively endured as an inevitable destiny (Cambi & Pinto Minerva, 2023; Galimberti, 2023). On the contrary, it is necessary to critically inhabit formal educational contexts to build pathways where otherness is not reduced to a mere numerical datum to be classified or a biometric profile to be optimized for commercial purposes (Scorza, 2025). Existence becomes authentic only when it reopens itself to the experience of limits, misattunement, and the mystery of the other dimensions that computational exactness and the instant gratification of chatbots may fail to accommodate.

It is precisely within this theoretical framework that the urgency of structuring concrete practices for the recognition of the other in formal educational contexts

is situated. As documented by the Italian Report Atlante dell'infanzia (a rischio) in Italia 2025, significantly titled "Senza Filtri: Voci di adolescenze" (Without Filters: Voices of Adolescents), we are facing the silent pain of a generation that is hyperconnected yet profoundly isolated; 41.8% of the surveyed 15- to 19-year-olds stated that they had asked ChatGPT or other AI tools for help when feeling sad, lonely, or anxious; this self-reported use figure does not measure voluntary social withdrawal, establish a clinical outcome, or demonstrate causation (Save the Children, 2025). The recognition of otherness, therefore, cannot be reduced to a formal act of legal tolerance or a passive bureaucratic registration of the other's presence in the classroom. Instead, it must be configured as an active and embodied pedagogical posture, capable of restoring the voice and the status of a sovereign subject to those immersed in digital loneliness. In this context, the teacher's role must be radically reframed: no longer a mere dispenser of notions, the educator becomes an "emotional mentor" capable of fostering the capacity for mentalization—that is, "minding emotions" (Jurist, 2018)—allowing adolescents to identify and process their inner turmoil without prematurely pathologising their existential discomfort. In school contexts, this translates into the activation of relational and laboratory-based devices—such as poetry therapy, theater education, and digital storytelling (Bulfaro, 2013; Lambert, 2013)—founded on authentic listening, free from digital filters or commodified mediations. Recognizing the other means welcoming their opacity and their constitutive resistance to standardized categorization attempts, thereby emphasizing that biographical singularity which inevitably escapes the mesh of predictive algorithms (Musa, 2025).

In formal education, poetry-based work can expand emotional vocabulary through metaphor and multiple interpretation, provided that participation does not compel autobiographical disclosure or claim therapeutic effects (Bulfaro, 2013; Mazza,

2017). AI may supply neutral word banks or translations, but it should not interpret a poem as evidence of the writer's mental state.

Within this framework, existential design emerges as a political and pedagogical act that requires the integrated development of emotional intelligence and social cognition (Salovey & Mayer, 1990; Goleman, 1999). Educating for a truly human existence demands a fierce pedagogical resistance against quantifiable popularity metrics—such as likes, follower counts, and visibility scores—which may contribute to externalised evaluations of self-worth and reduce interpersonal relationships to a market of external validations (Haidt, 2024). Educating for the recognition of otherness means training the gaze to perceive the suffering, trauma, and desire of the other beneath the polished surface of digital self-representations and beauty filters, thereby deconstructing those mechanisms of parasocial comparison that have been associated with anxiety, body-image concerns, and perceived social exclusion; the direction and magnitude of these relationships vary across studies and contexts among adolescents (Haidt, 2024; Save the Children, 2025). Schools are programmatically called to promote an ecology of the mind and of emotions that places the reciprocity of the gaze and the corporeality of presence back at the center. Only through a live encounter with the other's organism—marked by the effort of relational repair and the acceptance of pain (Mariani, 2021)—can the growing subject complete that journey of self-knowledge and emotional self-regulation essential to develop a critical relationship with data-intensive digital platforms. In conclusion, faced with the risk of a progressive artificialization of social bonds and the dematerialization of the interlocutor (Gallese, 2026), critical pedagogy responds not with a Luddite rejection of technology, but with the radical and situated affirmation of human dignity. The design of an authentic existence is realized to the extent that formal educational contexts know how to safeguard, preside over, and regenerate those real intersubjective spaces where human

beings, mirroring themselves in the eyes of the other, rediscover themselves as guardians of a common and shared promise of the future.

Educational theatre can stage conflicts and changes of viewpoint, with the teacher responsible for preparation and debriefing. AI-generated fictional dilemmas may become objects of critique: learners can ask whose perspective is absent, which response has been simplified, and why the system presents a particular utterance as empathic. Digital storytelling can support narrative organisation, multimodal expression, captions, and accessibility (Lambert, 2013; Robin, 2008), while consent, privacy, copyright, audience, and human discussion remain central. These practices create plausible opportunities for emotional articulation and recognition of others; their effects should be evaluated rather than assumed.

References

Barone, P. (2009). *Pedagogia dell'adolescenza* (pp. 1-252). Milano: Guerini Scientifica.

Benanti, P., Maffettone, S. (2025, November 16). La nuova partita del potere. *Corriere della Sera* [https://www.corriere.it/opinioni/25_novembre_16/la-nuova-partita-del-potere-94cafeda-b4ab-4bed-b2d5-23eb366abxlk.shtml].

Benanti, P., Maffettone, S. (2026, June 12). La colonizzazione del giudizio. *Corriere della Sera* [https://www.corriere.it/opinioni/26_giugno_12/la-colonizzazione-del-giudizio-c28a4eef-4b86-4855-bb7a-340cfd9faxlk.shtml].

Berlin, I. (2002). *Liberty* (pp. 1–382). Oxford, United Kingdom: Oxford University Press.

Bowlby, J. (1982). *Costruzione e rottura dei legami affettivi* (pp. 1-192). Milano: Raffaello Cortina.

Boyd, D. (2014). *It's complicated: The social lives of networked teens* (pp. 1-281). New Haven-London: Yale University Press.

Bruner, J. (1996). *La cultura dell'educazione. Nuovi scenari per la scuola* (pp. 1-240). Milano: Feltrinelli (2015).

Bulfaro, D. (2013). *Poesiaterapia. L'arteterapia della parola* (pp. 1-304). Milano: Le Brumaie.

Cambi, F. (2012). *Le pedagogie del Novecento* (pp. 1-232). Roma-Bari: Laterza.

Cambi, F., Pinto Minerva, F. (2023). *Governare l'età della tecnica. Il ruolo chiave della formazione* (pp. 1-144). Milano-Udine: Mimesis.

Elfenbein, H. A., & Ambady, N. (2002). On the universality and cultural specificity of emotion recognition: A meta-analysis. Psychological Bulletin, 128(2), 203–235. https://doi.org/10.1037/0033-2909.128.2.203

European Parliament & Council of the European Union. (2024). Regulation (EU) 2024/1689 laying down harmonised rules on artificial intelligence. Official Journal of the European Union. https://eur-lex.europa.eu/eli/reg/2024/1689/oj

Floridi, L. (2025). *La differenza fondamentale. Artificial Agency: una nuova filosofia dell'intelligenza artificiale* (pp.1-372). Milano: Mondadori.

Floridi, L. (Ed.). (2015). The Onlife Manifesto: Being Human in a Hyperconnected Era. Springer. https://doi.org/10.1007/978-3-319-04093-6

Fondazione Carolina. (2026). Cuori e algoritmi: Ecco perché i nostri figli “amano” l’intelligenza artificiale. https://www.fondazionecarolina.org/2021/news/cuori-e-algoritmi-ecco-perche-i-nostri-figli-amano-lintelligenza-artificiale/

Galimberti, U. (2023). *L’etica del viandante* (pp.1-480). Milano: Feltrinelli.

Gallese, V. (2026). Il Sé digitale. Dai neuroni specchio alla mediazione tecnologica. Raffaello Cortina.

Goleman, D. (1999). *Intelligenza emotiva. Che cos’è e perché può renderci felici* (pp. 1-512). Milano: BUR.

Gopika, R., Sriram, S., Balakarthik, M. (2026). *Emotion-Adaptive Artificial Intelligence Learning System Using Multimodal Behavioral Analysis*. International Research Journal of Education and Technology, 9 (3), 1757-1764.

Haidt, J. (2024). *The anxious generation. How the great rewiring of childhood is causing an epidemic of mental illness* (pp. 1-385). New York: Penguin.

Iori, V. (2012). *I giovani e la vita emotiva*. Education Sciences & Society, 3,1, 23-35.

Jurist, E. (2018). *Minding emotions: Cultivating mentalization in psychotherapy* (pp.1-200). New York, NY: Guilford Press.

Lambert, J. (2013). *Digital Storytelling: Capturing Lives, Creating Community* (pp. 1-234). New York and London: Routledge.

Luna, R. (2025). *Qualcosa è andato storto* (pp. 1-204). Milano: Solferino.

Mariani, A. (Ed.) (2021): *La relazione educativa. Prospettive contemporanee* (pp. 1-252), Roma: Carocci.

Mazza, N. (2017). Poetry therapy: Theory and practice (2nd ed.). Routledge.

McStay, A. (2018). Emotional AI: The rise of empathic media. SAGE.

Montemayor, C., Halpern, J., & Fairweather, A. (2022). In principle obstacles for empathic AI: Why we cannot replace human empathy in healthcare. AI & Society, 37, 1353–1359. https://doi.org/10.1007/s00146-021-01230-z

Morin, E. (1999). *La tête bien faite: Repenser la réforme, réformer la pensée* (pp. 1–154). Paris, France: Seuil.

Nussbaum, M. C. (2001). *Upheavals of thought: The intelligence of emotions* (pp. 1–751). Cambridge, United Kingdom: Cambridge University Press.

Odgers, C. L., & Jensen, M. R. (2020). Adolescent mental health in the digital age: Facts, fears, and future directions. Journal of Child Psychology and Psychiatry, 61(3), 336–348. https://doi.org/10.1111/jcpp.13190

Orben, A., & Przybylski, A. K. (2019). The association between adolescent well-being and digital technology use. Nature Human Behaviour, 3, 173–182. https://doi.org/10.1038/s41562-018-0506-1

Ordine, N. (2013). *L'utilità dell'inutile: Manifesto* (pp. 1–168). Milano, Italia: Bompiani.

Paiva, A., Leite, I., Boukricha, H., & Wachsmuth, I. (2017). Empathy in virtual agents and robots: A survey. ACM Transactions on Interactive Intelligent Systems, 7(3), Article 11. https://doi.org/10.1145/2912150

Picard, R.W. (1997): *Affective Computing* (pp. 1-292). Cambridge: MIT Press.

Robin, B. R. (2008). Digital storytelling: A powerful technology tool for the 21st century classroom. Theory Into Practice, 47(3), 220–228. https://doi.org/10.1080/00405840802153916

Salovey, P., & Mayer, J. D. (1990). Emotional intelligence. Imagination, Cognition and Personality, 9(3), 185–211. https://doi.org/10.2190/DUGG-P24E-52WK-6CDG

Save the Children (2025): *Atlante dell'infanzia (a rischio) in Italia 2025. Senza filtri. Voci di adolescenze*, (Eds) Daniele Biella, con Diletta Pistono (pp. 1-308). Rome: Save the Children.

Scorza, G. (2025). *Diario di un chatbot sentimentale. Come le macchine ci imitano e ci manipolano* (pp. 1-218). Roma: Luiss University Press.

Standage, T. (2003). *The Turk: The life and times of the famous eighteenth-century chess-playing machine* (pp. 1–272). New York, NY: Berkley Books.

Strollo, M.R., Buccini, F. (2025). *Dall'intelligenza artificiale all'empatia artificiale: qual è il futuro dell'educazione?*. Cultura pedagogica e scenari educativi, 3 (1), 75-86.

Vistorte, A.O.R., Deroncele-Acosta, A., Ayala, J.L.M., Barrasa, A., López-Granero, C., Martí-González, M. (2024). *Integrating artificial intelligence to assess emotions in learning environments: a systematic literature review*. Front Psychol, 19, 15:1387089.