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REVIEW ARTICLE

Artificial intelligence and person-centered education

Inteligencia artificial y educación centrada en la persona

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Abstract

Artificial intelligence (AI) currently occupies a central place in the debate on the use of technology within person-centered educational ecosystems. Its capacity to manage information and support complex cognitive tasks calls for a critical evaluation of its integration into contexts whose purpose is formative rather than merely instrumental. This article proposes a conceptual framework for such integration, grounded in a robust understanding of human nature, the ambivalent power of technique, and the role of justice and friendship in Aristotle, together with the virtue ethics developed by the philosopher Alasdair MacIntyre.

Keywords: Bioethics; Ethics; Educational technology; Moral education; Human dignity.

Resumen

La inteligencia artificial (IA) ocupa hoy un lugar central en el debate sobre el uso de la tecnología en ecosistemas educativos centrados en la persona. Su capacidad para gestionar información y apoyar tareas cognitivas complejas exige una evaluación crítica de su integración en contextos cuya finalidad es formativa y no meramente instrumental. Este artículo propone un marco conceptual para dicha integración, basado en una comprensión robusta de la naturaleza humana, el poder ambivalente de la técnica y el papel de la justicia y la amistad en Aristóteles, junto con la ética de la virtud desarrollada por el filósofo Alasdair MacIntyre.

Palabras clave: Bioética; Ética; Tecnología educacional; Educación moral; Dignidad humana.

Introduction

Currently, the influence of technology on education generates discrepancies regarding the assessment of its use. These differences are heightened by the presence of significant funding from technology companies in educational institutions, which makes it imperative to reflect on the role of technology in learning (L'Ecuyer, 2023). In this regard, risks such as overstimulation have been identified, while potential benefits have also been recognized. As will be discussed throughout these pages, due to the growing availability of technological offerings for schools, it is crucial to evaluate technology not only in terms of its effectiveness in transmitting information and knowledge, but also by considering its impact on the integral development of the person, in which consideration of human virtues is important.

For this reason, the use of technology in the educational ecosystem must be conditioned by fundamental questions: How can technology be better understood in order to take advantage of the potential of artificial intelligence (AI) in education? What educational principles should be guaranteed to achieve an appropriate use of technology that reflects moral principles such as justice, friendship, and respect for vulnerability? How can the integration of technology into the educational ecosystem be ensured in a way that enables personal flourishing and the common good? And what are the opportunities and challenges generated by the presence of AI in the educational ecosystem, and what restrictions should be taken into account to allow its use by students?

It is argued that, in order to answer these questions, technology must be evaluated in relation to the constitutive principles and the dimensions that contribute to the integral growth of all those who participate in the educational community.

Technique, technology, and power in education

Contemporary discussions on the use of technology in education focus on its capacity to promote or hinder the integral development of the person. This biological and spiritual development is particularly decisive during the school years, when character education enables an appropriate integration of the vital dimensions of the human being (Naval et al., 2015; Naval et al., 2021; Balaguer et al., 2021). In this regard, it has been emphasized that character and virtue education is not limited to instrumental skills, but refers to human excellence and the ultimate meaning of life, in contrast to an educational conception dominated by merely utilitarian and individualistic ends (Arthur, 2023).

Character education thus has a decisive impact both on personal formation and on the cultural configuration of a community, as it guides shared ends and ways of life that emerge from the flourishing of moral virtues (Kristjánsson, 2015a). However, the instrumentalizing tendency of modernity has favored excessive individualism that weakens these tasks by reducing education to private competencies disconnected from the common good. This development has been analyzed from the perspectives of anthropology and ethics as an abandonment of the proper ends of the human will, subordinating them to a technical-pragmatic rationality that has ultimately emptied human life of meaning, subjecting it to the domination of technical power (Guardini, 1982).

From this perspective, understanding the educational use of technology requires going beyond its mere utilitarian consideration and recognizing its cultural and communal dimension. Human life is not exhausted by the individual effects of artifacts, but is situated within the horizon of the common good, which always exceeds the sum of its components (MacIntyre, 2001). Technology, as a synthesis of functionality and cultural mediation, shapes new forms of interaction and shared life, as it incorporates human intentions that transcend its mechanical structure and become embedded in the ethical

and aesthetic dynamics of existence (Parente, 2010).

This consideration acquires particular relevance in the field of AI, insofar as it directly affects knowledge, one of the most distinctive characteristics of the human person, and within this framework, comparisons between human rationality and the epistemological status of AI have recently been proposed (Sánchez, 2018; Ruffini, 2017; Reggia et al., 2017). Although AI operates through algorithmic systems capable of processing information and learning from human intelligence, it lacks the ability to freely determine the ends of its own knowledge, a characteristic that constitutes a distinctive feature of human rationality (Sánchez, 2018). Nevertheless, the progressive improvement of these systems gives AI significant power, the use of which may have a substantial impact both on individual intellectual work and on the configuration of community relationships (Bringsjord & Govindarajulu, 2022).

To adequately evaluate this technology, it is necessary to recover the classical notion of technique as recta ratio factibilium, that is, as an intellectual habit guided by practical reason toward higher human, personal, and social goods (Sánchez-Migallón, 2015). From this perspective, technique is not separate from moral life, but is intrinsically human and social, since its achievements are objectified culturally and transmitted as a starting point for new communal endeavors (Polo, 2016).

The proper integration of AI into education and society therefore requires grounding its use in intellectual and moral habits that orient it toward the common good, preventing it from becoming an alienating power reduced to utility. Only in this way can technology contribute to a culture founded on justice, friendship, and the recognition of human vulnerability, integrating harmoniously into personal and communal life (Guardini, 1982; Lombo & Giménez, 2024).

Justice, friendship, and vulnerability: social foundations

The purpose of this section is to highlight the importance of the relationship between justice, friendship, and the recognition of human vulnerability for the constitution of social life. This framework is decisive for understanding the appropriate use of technology and, particularly, of AI. The perspective adopted is classical in nature and draws on some fundamental elements of Aristotle's philosophy, which make it possible to show how technique is naturally integrated into community life, thus providing a solid foundation both for character education and for the ethical orientation of the use of technology.

For Aristóteles (trans. 2010)—in Nicomachean Ethics, VIII, 9, 1159b 24–1160a 8—social life is not constituted simply by coexistence in the same space or by relationships based on utility or exchange, but by deeper practical realities that structure the community from within: justice and friendship. Neither is an accessory element; rather, both are essential dimensions of every form of shared life, present wherever human beings participate in a community, whether in the family, professional, civic, or circumstantial sphere.

In this regard, the author maintains that justice and friendship emerge within the same relationships and develop together: the closer the bond of friendship, the greater the demand for justice, and the more serious its violation. It is not the same to act unjustly toward a stranger as toward a friend, sibling, or parent, since injustice becomes more serious in proportion to the closeness of the bond that unites people. Hence, the community is preserved when justice protects friendship and prevents its corruption, with both sharing the same scope in social life and making it possible for what is shared among friends not to be reduced to what is merely useful, but rather to express an authentic form of coexistence (Aristóteles, trans. 2010).

It follows from the foregoing that justice is involved in each of the various types of friendship, to the extent that it prevents the friendship from becoming distorted and the

bonds that unite people from being broken. Moreover, the form of justice that preserves the community arises from natural human potentialities—implicit in the well-known statement in Politics I, 2, 1253a 9—that the human being is a social animal, and these potentialities are also expressed in technique and in devices or means that can serve to foster communication grounded in truth and honesty (Aristóteles, trans. 1970).

For Aristóteles (trans. 2010), true friendship possesses a solid and flexible nature, capable of adapting to honest human relationships insofar as justice is also present. According to his fundamental classification of friendship—set forth in Nicomachean Ethics, VIII, 3, 1156a 5–1157a 35—it is divided into friendship based on interest, friendship based on pleasure, and perfect friendship. The latter—discussed in Nicomachean Ethics, VIII, 3, 1156b 5–30—occurs between good, honest people who are equal in virtue. In contemporary language, it is usually identified with selfless or genuine friendship when it occurs in the personal sphere. However, Aristotle does not conceive of it solely at this level, but rather as a structural reality of the community, which gives it considerable educational value (Kristjánsson, 2020). It is precisely this type of honest friendship that preserves interpersonal relationships over time, since it is not subordinated to pleasure or utility, but instead forges bonds that endure even when pleasure or benefit disappear.

Therefore, it is clear that genuine relationships of friendship and justice possess significant social and educational value (Aristóteles, trans. 1970) and can be enhanced by elements such as technique, which likewise derives from the rational and social nature of the human being. From this perspective, the Aristotelian natural and communal framework provides an appropriate rational framework for restoring the proper ends of technique and for a correct understanding of the ordering of technology within an educational community. In this context, following this framework makes it possible to analyze more precisely the use of AI in person-centered educational systems, avoiding its distortion and ensuring its integration into the common good, insofar as technical elements are oriented toward strengthening social bonds (Montoya & Giménez, 2022).

Nevertheless, the framework presented, within which the virtues that make the experience of justice and friendship possible are cultivated, would remain incomplete without a serious recognition of human vulnerability. The virtuous human being is one who integrates both his or her own vulnerability and that of others into moral judgement and action. Indeed, prudence and the moral virtues that accompany it should lead to the recognition of a fragility inherent in the human condition, especially during its most defenseless stages. In this way, vulnerability is revealed as an indispensable condition for the development of virtue in the human being understood as a rational and social animal (MacIntyre, 2001; Giménez & Lombo, 2022). Along these lines, MacIntyre (2001) has shown that the acquisition of virtues oriented toward the care of the vulnerable contributes decisively to the configuration of a more human world, even if it is not functionally perfect.

However, according to the British philosopher, modernity has fostered in human beings a constant desire to preserve living conditions that guarantee survival in society, a trait that may be linked to an animal instinct for survival (Bello & Giménez, 2018). This complex and articulated state of mind, oriented toward the satisfaction of appetites and bodily well-being, tends to dominate practical reason and progressively distance human beings from the acquisition of virtues, particularly from a form of justice that should integrate compassion for the vulnerable as a constitutive part of moral action. Therefore, the truly good and virtuous human being is one who performs just actions by integrating both his or her own vulnerability and that of others, preventing the indiscriminate desire for satisfaction from prevailing on the path toward magnanimity, understood as the fullness of virtue (Bello & Giménez, 2018; Llano, 2002).

Indeed, the magnanimous person (megalópsychos) is presented as a model of virtue (Aristóteles, trans. 2010; Curzer, 1990, 1991). Nevertheless, this characterization contrasts with the absence of an explicit development of the virtue of gratitude in his work,

despite having the conceptual elements necessary for it (Kristjánsson, 2015b). From this perspective, MacIntyre criticizes the Aristotelian figure of the magnanimous person by emphasizing the risk of excessive self-sufficiency, which is incompatible with an ethics of vulnerability (MacIntyre, 2001; Llano, 2002). In this regard, it is observed that the magnanimous person tends to remember with pleasure the benefits he or she has given and to reject the remembrance of those received, which could lead to vanity or excessive pride, risks that can be corrected through the practice of humility, especially within the Christian tradition (Boyd, 2014).

However, Aristóteles (trans. 2010) himself offers a more balanced interpretation of magnanimity by emphasizing that its principal characteristic is detachment from external goods rather than distance from other human beings. The magnanimous person has friends and guides his or her life by virtue rather than by honor. Furthermore, the Stagirite identifies vanity as the vice arising from excess in this virtue, characteristic of someone who believes that he or she deserves honors that are not actually deserved, and states that the vain person can never surpass the magnanimous person in true merit. Thus, the author—in Nicomachean Ethics, IV, 2, 1122b 35–1125a 30—emphasizes the realism of magnanimity by asserting that the purpose of virtuous actions does not lie in what one believes one deserves, but in acting justly, even when this does not lead to external success.

For all these reasons, even someone who has made considerable progress in virtue must recognize the limits imposed by the exercise of his or her own power and by the aspiration to great achievements, since the risk of a misunderstood self-sufficiency always remains (MacIntyre, 2001). Hence, there is a need for appropriate education in the use of human power and in the ability to transform the environment, through virtues such as prudence and technique, integrated into the practice of justice and friendship. In this sense, the appropriate use of technology, as an expression of the human virtue of technique, can become an especially valuable educational means for properly understanding the scope of magnanimity, particularly when it is employed in community activities aimed at promoting the virtues.

Technology and a person-centred educational ecosystem

Before analysing the incorporation of artificial intelligence into the educational ecosystem, it is appropriate to clarify that, in general terms, it can be understood as a set of technological systems that, based on human instructions, generate products, recommendations, or predictions with an impact on different areas of human activity. Although these systems may appear to be autonomous, their operation depends on algorithmic processes of statistical learning, without this implying intentional learning, practical deliberation, or properly human reasoning (Russell & Norvig, 2009; Sánchez, 2018; Fondo de las Naciones Unidas para la Infancia [UNICEF], 2025). This clarification is relevant because it makes it possible to correctly situate moral responsibility for the use of these technologies, which always lies with the people and institutions that design, implement, and use them. Precisely for this reason, the philosophical interest lies not only in the technical functioning of these systems, but also in the way in which they transform educational processes and human relationships.

Technology is not neutral: it teaches and shapes ways of learning, with positive or negative effects. At an early age, some authors warn of ‘negative’ learning through the capture of attention: the pupil moves from being an active agent to a passive recipient, and overstimulation may be associated with difficulties in language, attention, and concentration, hyperactivity, addictions, superficial thinking, working memory failures, access to inappropriate content, and even depression. Added to this is the risk of misinformation and a certain insensitivity towards reality: information that is attractive to the senses, easily accessible, and lacking in veracity directs the disposition towards

pleasure and may distort knowledge or deactivate the desire to understand, particularly when the senses have been saturated (L'Ecuyer, 2023; Martínez, 2023).

Nevertheless, clear advantages should not be overlooked, particularly when maturity, self-governance, responsibility, and judgement are developed, as conditions for reflective freedom oriented towards the good (L'Ecuyer, 2023). Indeed, these systems can far surpass human cognition in tasks such as memory, calculation, or statistical analysis; when appropriately oriented, these capabilities can contribute to supporting certain educational processes (Korteling et al., 2021). These characteristics, which are central to personalised education, are strengthened in environments where virtues are promoted and justice and friendship are learned to be lived out (Pérez, 2022). Along the same lines, reports by the Organización de las Naciones Unidas para la Educación, la Ciencia y la Cultura (UNESCO, 2023, 2024a) indicate that technology can have low or medium positive impacts when it is well integrated: it helps to reduce gaps associated with teacher shortages, promotes professional collaboration and content creation, and adaptive software can support the monitoring of progress, particularly among underperforming students, always as a complement and while maintaining direct teacher–student interaction. It can also facilitate access to realities that are difficult to know or experience directly due to logistical or economic limitations (e.g., visual media or simulators), and improve communication with families, although the priority of personal relationships is emphasised (UNESCO, 2023, 2024a).

To organise this integration, it is useful to draw on the concept of the learning ecosystem: a set of elements and relationships involved in learning and its environment (Sulmont, 2021). This includes people, content, technology, culture, strategy, and the relationships among all these factors (UNESCO, 2024a). In a person-centred education, the aim is to help each member exercise reflective freedom, develop character, and sustain an interest in truth within the community, taking into account constitutive principles (uniqueness, openness, transcendent origin) and personal dimensions (corporeality, intelligence, will, and affectivity) (Lombo & Giménez, 2024).

From this perspective, technology should be subordinated to technique understood as a practical virtue for producing and using means in the service of care, the transformation of the world, and the development of the person (Montoya & Giménez, 2024). If the educational context fosters justice and friendship, devices need not contradict personal principles or hinder integral development; rather, they should promote self-knowledge and respect for privacy (uniqueness), build bridges of communication without replacing genuine encounters (openness), and, where appropriate, facilitate access to spiritual goods that would otherwise remain inaccessible (transcendent origin).

Consequently, the educational effects of technology depend on its integration into properly human ends: its mere presence is not sufficient, since it can produce highly negative outcomes if it is separated from the virtue of technique and from a communal framework of justice and friendship. Hence, its use should address basic questions concerning the user, the medium, the content, and the degree of actual control over the device.

The considerations developed here also show significant convergence with the recent magisterium of Leo XIV. In the encyclical Magnifica Humanitas, the Pontiff insists that authentic technological progress requires an increasingly profound understanding of the person and of his or her inviolable dignity (León XIV, 2026). Within this horizon, the true educational challenge does not consist solely in learning to use artificial intelligence intelligently, but in forming people capable of remaining fully human in the exercise of their freedom and moral responsibility within an increasingly technologised environment. Technology thus finds its legitimacy when it strengthens freedom, responsibility, and encounters between people, rather than replacing them. In this sense, the ultimate criterion for assessing the incorporation of AI into education is not its technical sophistication, but its capacity to serve the integral development of the person and the

strengthening of educational relationships. Consequently, the ethical assessment of AI does not rest on the tool considered in isolation, but on the human decisions that guide its design, implementation, and integration into the educational ecosystem.

This framework does not intend to remain at the level of theoretical foundations, but rather to offer operational criteria to guide concrete decisions within the educational ecosystem. Therefore, in order to prevent these principles from remaining at a merely declarative level, it is necessary to move towards their operationalisation through specific evaluative criteria. At the intellectual level, it is possible to assess whether AI tools foster active understanding—for example, through explanation, argumentation, or critical review—or whether, on the contrary, they replace the exercise of personal judgement. At the moral level, it is necessary to consider whether they promote habits such as truthfulness, responsibility in the use of sources, and authorship, while avoiding forms of uncritical delegation. At the community level, attention should be paid to whether these tools strengthen dialogue between students and teachers or whether, on the contrary, they tend to isolate the student in interactions mediated exclusively by systems.

These criteria can be applied to different forms of generative AI in education, whose use requires specific pedagogical and ethical guidance (UNESCO, 2024b). Thus, for example, intelligent tutoring systems or adaptive environments may be valuable when they support the pupil's deliberative process, but their use should be limited when they replace educational interaction or induce cognitive dependence. Similarly, practices such as mass algorithmic surveillance require strict regulation, insofar as they may erode trust, freedom, and the sense of personal responsibility within the educational environment (Holmes et al., 2022).

All of this requires the development of explicit institutional policies that include mechanisms for ethical assessment and accountability, such as algorithmic audits, transparency regarding pedagogical criteria, and participation by the educational community, in line with the recommendations formulated by the European Commission (European Commission, 2024). These policies also require educational institutions to define clear institutional criteria for the responsible use of AI by teachers and students (U.S. Department of Education, 2023). It is also worth noting that systems designed to optimise learning metrics may come into tension with genuinely deliberative education, which requires space for error, interpretative conflict, and interpersonal dialogue.

Finally, although some systems may simulate empathetic responses, this 'empathy' is not real, but rather a functional simulation, lacking lived experience and intentional understanding, resulting from processes of programming and statistical adjustment. As Leetaru (2018) has noted, these systems do not learn or understand in a properly human sense, but rather identify patterns in large volumes of data and generate responses based on them. This fact reinforces the need to place the formation of virtues among teachers and students at the centre, as an indispensable condition for the prudent and genuinely human use of AI.

Conclusions

The analysis conducted allows us to affirm that the incorporation of AI into the educational ecosystem cannot be assessed solely on the basis of technological efficiency or academic performance criteria, but rather in light of the proper aims of education and the integral development of the person. The decisive question is not so much to determine what these systems can technically do, but rather to discern what place they should occupy within an educational community oriented towards human flourishing.

In light of the foregoing, the incorporation of AI into education should be evaluated from the perspective of the virtue of technique, understood as a practical habit oriented

towards the good of the person and the community. From this perspective, the ethical legitimacy of these technologies depends on their ability to strengthen freedom, prudential judgement, responsibility, the shared pursuit of truth, and the relationships of justice and friendship that constitute the core of a person-centred education. Technology does not replace moral discernment; rather, it demands even greater responsibility from those who design, implement, and use it.

In the final analysis, a person-centred education requires the development of criteria for discernment that make it possible to integrate AI prudently into the educational ecosystem, avoiding both its indiscriminate rejection and its unreflective adoption. Only an understanding of technique subordinated to prudence, justice, friendship, and the recognition of vulnerability will enable AI to genuinely contribute to human flourishing and to the strengthening of educational communities that are authentically person-centred.

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