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ABSTRACT

Starting from the assumptions of the enactive paradigm of the mind, the paper sheds light on some implications concerning the embodied and situated nature of those cognitive processes that can guide the educational process. The aim of the analysis is to highlight the centrality of the body and the need to design increasingly inclusive educational actions. These learning environments can represent a dynamic framework for guided processes of *meaningful discovery* of others, of self and of reality.

Partendo dagli assunti del paradigma enattivo della mente, il contributo dimostra come la natura incarnata dei processi cognitivi abbia delle ricadute sulla progettazione formativa. L'obiettivo è evidenziare la duplice necessità di valorizzare la centralità del corpo nel processo di apertura ai significati del soggetto e di progettare azioni formative e ambienti di apprendimento sempre più inclusivi, come cornici dinamiche per processi di scoperta significativa degli altri, di sé e della realtà.

KEYWORDS

Enactive didactics; embodied cognition; pedagogical epistemology
Didattica enattiva; cognizione incarnata; epistemologia pedagogica

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Introduction

Despite the assiduous search for integrative and innovative methods that can make instruction and school practice as a whole more effective (Reynolds et al., 2014), there is still - to a large extent - a kind of "disconnect" between the theoretical dimension and pragmatic application (Scheerens, 2016). Thus, while the scientific debate continues to be vibrantly enriched with insights, reflections and valuable research results, on the application side of classroom activity there seems to be no "shake-up." Individual institutions remain firmly anchored in best practices (Bygate et al., 2013), which have in fact been at the core of the educational act for generations, and educators package their teachings by adapting them in response to certain conditioning needs: restrictions due to timetable, mandatory use of certain teaching materials, and other bureaucratic and administrative factors, which differ depending on the type of institution referred to (Macedonia, 2019). The complexity of such a multi-faceted framework studded with a host of constraining variables has undoubted repercussions on "factual reality." And, even though theory proceeds apace toward "other" educational realities, among the school desks our students still reckon with learning experiences similar to those experienced by their parents: sitting more or less composedly for the entire day, listening, writing and reading (Baker, 2014).

One possible reason for such a slow evolution of the Italian educational institution can be traced back to the pedagogical tradition, which is in turn rooted in philosophy. For a long time, in fact, we referred to a classical dualistic paradigm of Cartesian memory, deeply linked to a mechanistic conception of the body, considered as qualitatively separate from the mind. More specifically, such a "mind-body" dichotomy determined the delineation of a precise representation of the subject-understood as abstract, disembodied and isolated, and continued to influence the philosophical landscape well into the 20th century, permeating the principles of classical cognitive science.

With the idea of the computational mind, cognitivists were able to cash in on the advantage of considering the mind as a machine and thus as something that could be studied rigorously-against Descartes; however, without having to abandon the dualism between mind and body since the analogy with that *sui generis* machine that is the computer allowed them to continue to keep the mind sheltered from the natural sciences-thus making Descartes happy (Parisi, 1999 :52).

Indeed, rooted in the strand of Rationalism, the cognitive sciences (Fodor, 1983; Pylyshyn, 1984) have long regarded the mind as a set of computational operations, subdivided into domain-specific modules and completely disconnected from the external world of reference. Although, over the years, the more extreme forms of cognitivism have been partly revised and "softened" (Fodor, 2006, 2008; Pylyshyn, 2007; Berwick et al., 2013, Fodor and Pylyshyn, 2014), the central tenets of classical cognitivism still influence the spheres of learning and education. Perhaps mostly unknowingly, contemporary dualists are numerous. Indeed, it is still a common and widespread belief that body and mind have different roles and functions, with the mind the sole undisputed protagonist when it comes to education. In other words, learning is a mental affair. While the body is left, at most, with the arduous job of supporting us.

Dewey (1966), extraordinarily ahead of his time, had suggested that shifting the focus of reflection to action would certainly contribute to the dissolution of traditional barriers between mind and body (Caruana and Borghi, 2016). The advent and development of neuroscience has resulted in a significant departure from the dictates of rationalism in favor of a concrete revaluation of corporeality. More specifically, according to the theories of Embodied Cognition each individual, far from being a mere external observer, is essentially immersed in the world with which he or she has to interact. The mind, divesting itself of the clothes of an "abstract and isolated entity," is described as itself integrated into the body's sense-motor systems (Barsalou, 1999, 2008). From this it follows that, crossing the boundaries of the brain, cognitive processes are mediated by "body-based systems" (Alibali and Nathan, 2012): perception and action, among others (Dijkstra and Post, 2015).

At the same time, the environment is also freed from a neutral meaning, becoming intrinsically charged with meanings and references to action and interaction. Reflection on the role of the environment in cognitive processes has renewed the concept of cognitive process independently and in parallel with that on the role of the body, and is centered on the assumption that cognitive processes are subject to constraints proper to the physical world that include the constraints posed by one's body, though not exhausted in them. To say that cognitive processes are grounded, that is, rooted in the environment, means not only that body states are necessary for cognition, but that cognitive processes are governed by specific simulation processes during which perceptual and motor states acquired through experience are reactivated in the service of cognition (Caruana and Borghi, 2016 p.24). According to the embodied and grounded approach, concepts trigger the

neural activation pattern of experience with objects in the external world. In other words, thinking about an object (or person) reactivates the simulation of the experience one has had with the object (or person) in question (Barsalou, 2008; Glenberg and Gallese, 2012), evoking sensorimotor responses: actual bodily activities in the brain (Pulvermüller, 1999; Pulvermüller, 2005).

Thus, as much seeing a couch as thinking about it determines an activation of the perceptual system, anticipating a mental state of relaxation and preparing for the action of sitting; all to prepare the organism to interact with any couches in the external environment. Thinking about an object, then, triggers the activation of a distributed network of different sensory modalities (in the case of our couch, information related to its color, the feel of the fabric under our fingertips, how soft it is when we sink into it, and so on) (Gallese and Lakoff, 2005). Embodiment restores a place of honor to sensory and motor experiences, which, by creating multimodal sensorimotor representations in the brain, underlie cognition. In this way, the mind-body relationship proper to the Cartesian dichotomy is reversed: the body makes mental activities possible.

Abandoning the traditional dictates of a purely mechanistic view, Embodied Cognition restores a bodily dimension to the mind, describing cognition as the result of brain functions within a highly-interconnected system of cells. Thus, in response to the incorporeality inherent in the concept of classical mental representation, the idea of embodied cognition has taken shape, which, at the same time, is knowledge of the body, resides in it and is activated through the body itself. Such a redefinition of the mental in motor terms is aligned with scientific evidence that many complex cognitive tasks classically attributed to the manipulation of mental representations are, in fact, performed through the action of the sensorimotor system.

The educational strategies underlying the embodied model of cognition respond to the need to flexibly model the contextual variables of learning space and time to ensure that those involved have the opportunity for tailored multidimensional training that does not put the body and relationship in the background.

1. Giving body to the mind

The most recent approaches in cognitive sciences, advancing and deepening an embodied (embodied) and situated interpretation of cognitive processes, aim in the first place to unhinge the limits of a dualistic view of the subject proper to the classical orientations, characterized according to critics by a Cartesian and mechanistic conception of the body, understood as a reality separate from the

mind. In order to deconstruct the overall representation of an abstract, disembodied and isolated subject that ensues-that is, separated from the contextual horizon in which such a subject is in fact emerging, opening up to meanings and to itself through embodied action and social mediation-the new cognitive sciences have increasingly distinctly posited corporeality as the central node for understanding cognitive processes and subjective experience, declining mental inquiry according to an approach that comes to see as inextricably linked the organism, the action it performs and the environment in which the meaning of that action emerges. In renewing attention to the body, the new orientations consistently highlight its role as an experiential openness. Thus, the phenomenological meaning of "living body" (Leib) is recovered, not understood as a mere thing among things, as an object among other objects (Körper), but rather as a "vehicle of being in the world" (Merleau-Ponty, 2003, p. 130). The body is the carrier of all experience; it always accompanies the doing and acting of the person, to be considered in global terms, immersed in context. Reinterpreting the bodily dimension as an experiential openness to a world that in concrete acting is unveiled - in a process that allows the subject to appropriate itself in parallel - the body appears more appropriately, as neuroscientist Francisco Varela (1990) defines it, "an ontological machine" that projects toward the constitution of a world and of the self. Emphasizing how our cognitive organization reflects our physical grounding in the world, taking the body seriously, leads to interpreting cognitive activity as acting embedded in the context in which the embodied mind functions, that is, in the concrete structure and environmental and social dynamics that strongly condition and support the understanding and learning of meanings. The insistence on concrete placement, in addition to allowing for a "reincorporation" of the mind into the materiality of the body, thus leads to a situated reinterpretation of cognition, understood as the study of an agent in its actual environment-background. Highlighting moreover how organisms are complex units in which the brain, though certainly relevant, is part of a body in its entirety (Clark, 1999), the embodied and situated view of mind unhinges the neuro-centrism of certain approaches and those separations that prevented the relations between the organism, the action it performs and the environment from being grasped in their interacting complexity as inextricably linked. The resulting image of the subject is that of a flesh-and-blood agent, immersed in a situation in which the mind functions, according to an operation that makes the body-mind-world relationship inseparable. Thus emerges the distance between these perspectives and the visions of the mental of the classical cognitive sciences, a legacy of modern philosophy that had also influenced psycho-pedagogical knowledge and for which the mind would

be interpretable according to the famous metaphor of an information processor, only casually connected with a body: a new image, however actualized, of Cartesian dualism. The dependence of cognitive processes on the body in situated interaction then becomes a cornerstone on which to elaborate scientific models capable of grasping the way mind, body and world interact and mutually influence each other, as well as to design corresponding educational actions (Paloma Gomez, ed., 2009; 2013; 2014; Balduzzi, ed., 2002) designed to foster the functioning of the individual in inclusive learning contexts.

2. Body, meanings and experience

From the point of view of philosophical horizons, the current situated and embodied orientations recover and actualize, as already glimpsed, the lessons of Merleau-Ponty, but also those of Husserl (1985; 2002) or Heidegger himself, thinkers who in their works, from one end to the other, have revealed from a phenomenological and existential point of view how human activity and experiential openness to meanings can only be understood as a "being-in-the-world," as a contextualized and shared experience with others of an interwoven body-environment system, immersed moreover constantly in a tonality proper to affective feeling, which configures the space in which emotional acting is manifested and the related competencies unfold. At the same time, in support of the idea of an embodied and situated mind, cast in communicative interaction and social context, the new directions of cognitive sciences recapture, in mental inquiry, the cultural-historical lesson of the psychology of Vygotsky (1990) and those who variously actualize his insights, or again of the social psychology of the pragmatist Mead (2010; 2011). Such scholars, in their heterogeneity, share a vision of the development of the mental and of communication that is strictly situated, understood as a social activity between individuals, mediated by the othernesses that accompany and support us in the processes of acquiring and internalizing language (Bruner, 1995) and the other conceptual devices that culture and the socio-historical context make available. Mind, self-consciousness and the self, according to these approaches, do not emerge in the abstract and fleshless solitude of a Cartesian cogito-self, but in the relationship with others and through others with whom the subject interacts in a shared world in which he or she is practically involved and engaged, in a context that provides tools, meanings and linguistic devices: this is what is overall reaffirmed on the scientific level by embodied and situated cognition. No less relevant, as elements that can be re-actualized in the framework of these scientific directions, are the contributions of Piaget's (1993) view of the importance of active bodily mediation in the development of cognitive

abilities of human beings, and again, those related to the lesson of the pragmatist model of action (Dewey, 1966). Indeed, cognitive acts are revealed essentially as a doing, an acting in and about the world, right from perception itself. This, in such perspectives, is not to be understood as a mere and passive mirroring or abstracting of the properties of the world or the external information that some internal processor organizes (the mind or brain or a cogitating self that stands before the world as a mere spectator), but becomes a "perceptually guided action" (Varela, Thompson, Rosch, 1992), an acting that involves the whole corporeality and "brings a world into our hands" (Maturana & Varela, 1992, p. 45), correlatively unveiling the subject to itself, in a parallel and contextual co-dependence and co-specification of both poles of knowledge. On the level of ontogenetic development, the subject, by touching and being touched (experiencing in spontaneous movement and living, on his or her own "living body," these differences), manipulating, grasping, moving, literally learns to perceive, that is, to activate sense-motor schemas in which to order experience and encounter with things; in doing so, gradually the subject is able contextually to appropriate himself, to define himself, experiencing at first a nuclear sense of self, gradually becoming more and more complex and structured, thus learning to distinguish himself as an agent from the things around him, to recognize himself initially as an "I-possess" (Merleau-Ponty, 1968; Haselager, Broens & Quilici Gonzalez, 2012; Tarsi & Sergio, 2013).

In addition to mediating all knowledge, the body thus inserts the subject into a world that he or she learns to understand and recognize by acting with the support of and in synergy with others who guide and orient him or her -- in a process of scaffolding (Bruner, Wood & Ross, 1976) -- in the encounter with early meanings and, gradually, in the extension of the abstract and interpretive cognitive domain with which to organize experiences. Writes Merleau-Ponty (2003, p. 155) in an illuminating passage:

When I say that an object is on a table, with thought I always place myself in the table or object, and apply to them a category that in principle fits the relationship between my body and external objects. Without this anthropological scope, the word 'on' cannot be distinguished from the word 'under' or the term 'beside' [...]

More recently, similar insights have been developed by the psycho-linguistic research and cognitive semantics of Lakoff and Johnson, oriented toward an embodied approach. These scholars have well shown how the understanding of meanings involves the reactivation of areas devoted primarily to perception, movements and actions, as well as have shown the involvement of the body as a medium for constructing, linguistically grasping and internalizing more abstract

concepts, through the use of transpositions or metaphors that derive their basis from the relationship that as bodies individuals have with things. It is important to note with these authors how linguistic devices, e.g., certain metaphors, organize a whole system of concepts in terms of another that is closely related to the experience of the body and its acted and concrete relation to the world. One thinks of orientation metaphors that provide the concept with a spatial orientation-for example, all those based on the spatial relation up-down, forward-back, in-out, deep-surface, central-peripheral, etc. - -, hence to expressions such as "I feel high spirits," or to those related to social status as in "he has a high position; he will get to the top," or again, to all those expressions related to personal well-being (i.e., inherent in happiness, health, life, control, etc.) in which "everything that primarily characterizes what is good for a person" is SU" (Lakoff & Johnson, 1998, p.33). What the authors call the physical basis of such metaphors is always related to the body and concrete manipulation of the world. Treating this physical basis of metaphors to show their embodied character and grounded in the experience of corporeality, Lakoff and Johnson support the view of embodied cognition and illustrate some clear examples related to the more abstract dimensions of cognition as grounded in corporeality: the interpretive categories of reality or language itself, and its mechanisms of operation and referral (active in metaphor), are embodied in nature and refer to the experience of the body, without the speaker even being aware of such a tracing behind him or her.

Patrizia Violi (1997, p. 161), still in the field of semantic studies, points out to us in the same vein of reflections that "basic objects could be defined as the entities that identify an elementary action and on which a minimal narrative program is exercised." That is, the initial meaning of objects unravels in the action that refers back to possibilities of the body, emerges to the subject therefore manipulating, interacting, having a relationship mediated by the body immersed in the world. Things are manifested and revealed not to an abstract Cartesian mind but in their concreteness as "affordances," as Gibson (1979) puts it, or as "interactional properties" in the language of Lakoff and Johnson, that is, as possibilities commensurate with the bodily nature of subjects that is always at stake in the uninterrupted interaction with things, in "commerce with the world," Heidegger (2009) would say, a bodily correlation and participation that acts in the background and can become invisible, transparent and be removed, forgotten in its centrality and primary relevance, as happens in Cartesian settings. Objects functionally lend themselves, in relation to bodily abilities and potentialities, to the performance of actions endowed with situated and culturally inherited meaning, from which, as Lakoff and Johnson show, more abstract linguistic meanings are constructed.

Starting, then, from that bodily layer of access to things, the subject encounters the first meanings--e.g., the meaning of chalk in writing, that of the eraser in the action and experience of erasing, etc. -, grasps the usables (Heidegger, 2009) and the interconnections between things proper to each cultural-historical world that indefinitely refer back to one another - as, in the example above, the chalk refers to the eraser, this one to the blackboard, this one to writing, and so on (Costa, 2006) -, and in general appropriates the practices in which others instruct him, guiding him on a path of mediated acculturation between what history and culture make available to him (Tomasello, 2005).

These meanings thus originally offer themselves as the setting of bodily and cognitive acts, the initiation of development mediated and enhanced by language and the possibilities of further distinctions and abstractions that one learns to use (e.g., as seen, metaphors as devices that enhance the domain of what the subject can say from the body) and, starting from that encounter with the world, enrich in the process of ontogenetic development the domain of internalized cognitive possibilities. From the body to the mind, and back again, a continuum is delineated in this journey, a path without a split between domains (perception, language, social context and world, etc.) that are distinguishable but not separate.

The concrete and the role the body plays in this path of emergence of the mental, however, risk being invisible and transparent: precisely because they are active in the background of cognition, remaining behind, risking being removed in their function. The concrete, Varela (1992, pp. 9-10) reminds us in this regard, "is not a step toward something else: it is how we arrive and where we stand." Knowledge, he clarifies in the same pages, «is contextualized and its uniqueness, historicity and context are not 'noise' that hinders the understanding of the cognitive phenomenon in its true essence, that of an abstract configuration». Cognitive and cognitive capacities thus appear as the result of an unceasing interpretation emerging from the structures of corporeality in which the acts of understanding are rooted, experienced and experienced by a cognitive agent in the background of consensual action and cultural history, that is, in the socio-historical dimension of the embodied subject. This dual collocation reflecting the complexity of the bodily dimension understood in the experiential and phenomenological sense inherited from the new cognitive sciences is the same one that Varela, Thompson and Rosch (1992, p. 180), summarize with the expression of "embodied patterns of experience" by which a subject forges himself and through which he structures and co-specifies the environment, an idea in which the cultural-social dimension shared in a human community is also included:

Meaning includes the embodied patterns of experience and the pre-conceptual structures of our sensibility [...]. These embodied patterns are not personal or peculiar to the individual experiencing them. Our community helps us interpret and encode many of our schemas. They become culturally shared experiential modes and help us determine the nature of the meaningful and coherent understanding we have of our world.

3. Toward an enactive educational model

Recognizing the centrality of bodily and motor activation in the person's formative and developmental processes means giving the body the attention it deserves in educational contexts, reconfiguring it as an active node of learning, and valuing it as a meeting point between oneself and the environment to prepare a formative and relational climate appropriate to the person's needs.

The resulting learning model enhances this centrality, activating subjects in shared tasks of a cooperation that involves the performative dimension and, through necessary interaction, opens to group dynamics, supporting the gradual emergence of increasingly broad and inclusive spaces of collaboration.

Training experiences therefore should be arranged to facilitate body-world interaction and the movement of perception-action-cognition that leads to the construction of discovered and learned meaning, making subjects protagonists of the learning process itself through the activation of their own corporeality situated in the right facilitating context. In the search for solutions and the exploration of the space of possibilities, opportunities for the acquisition of new skills open up, in the coincidence of knowing with knowing how to do. Trainers play a facilitative role here, supporting learning that occurs through an exploratory journey of discovery of meanings that the subject is invited to encounter by activating and opening up to experiences and emotions. A process is thus traced in which the mind-body unit stands in constant relation to the world by making and manipulating the context within which to find and seek solutions, reformulating strategies of action and unveiling new frames of meaning. The active and exploratory involvement of the body, called to act in a shared form to achieve common goals, to touch, to modify, to intervene in things with other bodies within a wide margin of shaping freedom and inclusive coordination capable of accommodating all individual potentials for action, expands the space of metaphors acted out in the form of experiences involving emotionally rich experiences. Rehearsals, invitations to exploratory curiosity, enhancement of bodily and inter-body expressiveness, support for the collaborative activation of participants and whatever else may serve to "flesh out" knowledge, supported discovery and in sharing with others, overcoming one's own

delays and limitations, all should be put in place to foster learning in an inclusive context, corresponding to the most diverse needs that may arise.

By connecting those involved with their own and others' spaces of possibility, the training practices activated can open up to the experiences that embody the very understanding of diversity and respect for it, fostering a climate in which the individualized originality of being a person is grasped and the need to share in action the realization of common goals in which each person can be called upon to contribute according to his or her own specific possibilities and with the support of others, with a constant focus on what can enhance the quality of life (Giaconi, 2015). The inter-body, the relationship with the other's body and the common situational acting out in shared activities held together by negotiated and co-constructed metaphors, become the necessary prerequisites for the realization of the empathic processes functional to learning and identity processing of the self, in an inclusive processual flow through the body.

The training actions that can translate such cues into operativeness thus realize metaphorical frames that are emerging and delineating themselves during the activity itself, through tasks that imply a strong performative dimension, such as to activate and involve corporeity or require inter-body synergy. Such metaphors are acted out and experienced in situation and involve in wholeness the subject pushed to experience dimensions of his own functioning and of his relationship with the world and with others by essaying emotions and thoughts; of such experiences the participant is called to become aware, making them explicit in sharing, learning to functionally place and interpret his own and others' actions in different, sometimes bewildering, frames of meaning, to feel himself in other metaphors than his own habitus, to lose the ordinary reading of experience and to experience new ones. Action and thought, acted and reflected, physicality and abstractness, are bound in the rhythms and tasks activated to a mutual allusion and cross-reference in the performative continuum, without jumps, at most in an oscillating slope between one pole to the other punctuated by moments of action and moments of meta-reflexive pauses. These, moreover, always sink their meaning in the action itself and go tracing and composing in the time course of the whole training experience the deposit of a balance that gradually emerges from the plots of the acted metaphors themselves, from the difficulties experienced, from the hindrances or hiccups encountered from the disorientations and the alternative and unexpected solutions glimpsed in action, from the possibilities for the reconfiguration of meaning that unfold from new and other metaphors intuited and experienced in the performative gesture, which are functional for reorganizing the experiences and

the experience of self and others, as well as for activating more inclusive models of action. The training setting should be structured to place subjects in conditions that induce them to interpret and act metaphors of a collaborative and inclusive relationality, bearers of an unrepeatable perspective that goes to compose itself in a common and shared space, as much in the physical-spatial sense as in the metaphorical sense, that is, in the web of meanings that is being woven globally in the meta-reflective restitution that envelops each participant. Through bodily acts and actions, frames of meaning are thus solicited as metaphorical devices that posit collective well-being as coinciding with the well-being of each individual, without flattening the multiplicity of profiles, individual contributions and personal specificities.

From the assumption that the individual, in his or her actively involved corporeity, is formed and constructed through relationship in and with the world he or she inhabits, there follows an appreciation of the environment in which action takes place (Rossi, 2011). If the subject is located (situated) in an environment that he or she encounters in the forms and ways that his or her corporeality and culture open and allow, if, again, he or she is a flesh-and-blood, historical, concerned subject, a mind-body unit that manipulates things and thereby contributes to the making of an environmental niche in which he or she co-constructs meanings in interaction with others and goes at the same time defining himself or herself, the environment, according to an enactive reading (Varela, Thompson & Rosch, 1992), can no longer be conceived of as a pre-determined, pre-existing reality external to a mind that must represent it internally (e.g., through symbolic processing, according to the aforementioned mind-computer metaphor typical of classical-computational cognitivism). Proceeding beyond the dualistic schema, the environment is to be interpreted here as a domain co-specified by the embodied subject and in action, a product related to the autonomous activity of the cognitive agent that constantly operates in "structural coupling" (Maturana & Varela, 1985), relational and emotional with its surroundings. In this perspective, the environment is thus presented as the physical, social, cultural and relational extension within which individuals involved in the formative process inspect and experience their own modes of functioning and construction of meaning. It has been seen that in an attempt to overcome pockets of modern dualistic fractures between mind-body and mind-world, in their most recent developments cognitive science and psychology have recovered philosophically and deepened on the level of scientific analysis the scope of the body as an "ontological machine." The biological grounding of subjects, their being embodied subjectivities (embodied cognition) and situated in a specific ecological, historical and socio-relational context (situated

cognition) has been reconsidered precisely from the phenomenological re-conceptualization of the body. This is understood not as an object body, a purely passive receptor of a reality that is simply in front of it, but as the gateway to experience, that is, the key to re-interpreting the relationship between the mind and a co-determined and actively signified world from the sense-motor schemas, affordances, and possibilities that only from the "zero point" that is the body are offered. The environment, the context, is not an object pole divorced from the way of being bodies, it is not the mere objective correlate of a disembodied mind that contemplates and mirrors an abstract realm of objects, but it is a pole of an enactivating (enactive) relation between subject and object in a constant dynamic in which subject and environment are mutually enveloped according to an inescapable relationship. It is in the space generated by this correlation, in the liminal zones, at the boundaries between the internal and external worlds that metaphor is inserted as a device for learning, for organizing meanings, for redefining and renegotiating experience from which new learning and new modes of functioning are generated. Possibilities these to be experienced in the concreteness of a subject who forms and evolves in all the dimensions of his being a person in a constant relationship with himself, with others and with the background-environment (natural, cultural and symbolic) in which existence is staged and organized in frames of meaning and significance.

Conclusions

Hinging on an extended rationality paradigm of the body-mind-environment type, the enactive perspective suggests a rethinking of educational processes, requiring an unavoidable reevaluation of the subjective dimensions underlying interaction with the physical and social world. This, in turn, results in the need to resort to an integrated educational approach that, going beyond traditional models and tools, manages to contemplate multidimensionality and different rationales (Damiani et al, 2021). Placing the body in a central position with respect to educational processes implies recognizing its role as the active fulcrum of the learning experience, considering it as a connecting node with the external environment. All this with a view to a personalized construction of the educational context, modeled on specific subjective needs. Hence a model of active learning is derived, centered on collaborative and performative dynamics that, through forms of interaction, results in a group dimension, fostering increasingly broad and inclusive spaces of cooperation. In parallel, the organization of space and time in the learning context also deserves reconfiguration (Vanacore and Gomez Paloma, 2020). In fact, from this perspective, rather than representing predetermined constraints and

conditioning, spatiotemporal variables should be modulated in a flexible manner, taking into account the various learning needs and individual interactive dynamics that characterize each learning activity. In other words, unlike in a traditional lecture, space and time could follow a trend that is anything but linear, fully adapting to the needs related to the content and subjects of learning. Fostering curiosity, leaving room for the "unexpected," encouraging interactions and bodily expressions in a fully collabor-active dimension, all oriented in the direction of inclusive learning, in line with the different possible needs of the actors involved.

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