

THE FOCUS OF THE BODY AND MOVEMENT IN THE DIDACTIC AND EDUCATIONAL PATHS IN AAC

LA CENTRALITÀ DEL CORPO E DEL MOVIMENTO NEGLI ITINERARI DIDATTICO-EDUCATIVI IN CAA

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Abstract

The article makes a reflection on the focus of the body in action in communicative, emotional and learning processes recognizing, in Augmentative and Alternative Communication, a resource for teaching and inclusion. The development of inclusive educational paths is essential to the enhancement of the creative, vicarious and simulative aspects of the body which, through action, builds thoughts, conveys emotions, compensates for lackings and constitutes the center of relationships with the others. Where verbal language is absent and in all those cases where it is limited or difficult to understand, AAC can increase existing communication skills and, through the use of symbolic systems, increases the potential of the body and of the movement in the educational field.

Il contributo propone una riflessione sulla centralità del corpo in azione nei processi comunicativi, emotivi e apprenditivi, riconoscendo nella Comunicazione Aumentativa e Alternativa una risorsa per la didattica e l'inclusione. La costruzione di itinerari educativi inclusivi è imprescindibile dalla valorizzazione degli aspetti creativi, vicarianti e simulativi del corpo che, attraverso l'agire, costruisce pensieri, veicola emozioni, compensa mancanze e costituisce il fulcro delle relazioni con l'altro. In assenza del linguaggio verbale, e in tutti quei casi in cui esso risulti limitato o di difficile comprensione, la CAA può incrementare le capacità comunicative esistenti e, attraverso l'uso di sistemi simbolici, amplificare le potenzialità del corpo e del movimento in ambito educativo.

Keywords

Corpo, didattica, inclusione, comunicazione aumentativa alternativa.
Body, teaching, inclusion, augmentative and alternative communication.

1. Introduction

As a material and mortal being, home of temptations, of primordial instincts and simple needs, a temporary residence for the soul, the body, even when it becomes the home of a cogito (Descartes, 1996; Ferrini, 2015) is nothing but a tool to serve reason, deprived of its feelings, its perceiving and acting. This belief, long rooted in Western thought, has in fact hindered the recognition of a totality of the human being, preventing us from understanding that every act reveals that our existence is corporeal and that the body is nothing but the way we appear (Galimberti, 2002). In its dual meaning of “*body we inhabit*” and “*body inhabited*” by “an internal life that does not end in its physiology, but which produces twists, overlapping and resonances in our emotional, affective and psychic experience” (Gamelli, 2001, p. 11), the dimension of the body is increasingly being studied “no longer as an object of the world, but as a means of our communication with it, no longer as the total of determined objects, but as a hidden horizon of our experience, continuously present before any determining thought” (Merleau Ponty, 2003, p.144).

However, cultural isolation which has, for many years, characterized the different areas of knowledge and the consequent “ever wider, deeper and more serious inadequacy between our disjointed, fragmented, and disciplined knowledge” (Morin, 2000, p.5), has generated an objective inability to grasp the subtle thread woven together, favoring a fragmented knowledge, not very inclined to an analysis of the interactions and feedback between different realities, portraying one-dimensional images of the person: now body, now mind, now soul, now emotions. This persistent moving towards reductionism, which does not favor spread of thought or its ability to distinguish and unite, has had important repercussions in the educational field and has affected the understanding of teaching and of children’s education. In particular, it favored the construction of an education system in which the body’s dimension was the background to didactic-educational interventions that were not inclined to recognize its centrality in learning processes, and even less aimed at re-evaluating the set of skills present in those bodies already damaged by an unkind nature, but not lacking resources, communication skills and subjective and original ways of accessing knowledge because “intelligent bodies”, endowed with different abilities (Sibilio, 2002).

In fact, at the roots of the Italian tradition of education, it is possible to trace an interpretative model of disability which, by centralizing the neurobiological aspects linked to the pathological condition of the person, soon justified the presence of didactic practices, detached from ordinary educational contexts, apparently more suitable “differential” and “special” places, considered individual weaknesses, deriving from permanent disabilities that prevented or made learning difficult, the cause of students’ exclusion and, last but not least, implicitly justified the lack of specific teacher training on the subject of body potential in action and in relation, subject and object of learning. The original medical model, in fact, left little room to “different approaches, capable of interpreting education in a less authoritarian way, as a co-construction process in which the trainee plays a central role in the active development of his skills” (Dovigo, 2008, p.19) and, due to a disability targeted by subsidy and therapeutic treatments, did not anticipate an opening towards the construction of more flexible teacher training itineraries inclined to create real inclusive opportunities for the disabled pupil’s personal growth in the school context starting from a pedagogy of body and movement.

The current concept that human functioning, on the other hand, can be the result of a much more complex interaction between factors of a biological, psychological and environmental nature (WHO, 2002; 2007) has determined, from a systematic and complex perspective, a growing attention to those aspects of the context that can significantly affect the improvement of a person’s quality of life. In this sense, significant responsibility is attributed to education, teacher training and teaching leading to social and didactic inclusion.

The child’s body, its structural and functional development, its personal way of acting are placed in a constant analytical process between nature and culture: a child “works well from

an evolutionary point of view if it manages to positively intertwine the biological push towards growth with the various forms of learning, given by experience and contact with human relationships and physical environments. Education mediates this intertwining, in its multiple daily actions, providing stimuli, guidance, company, feedback” (Ianes, 2008, p. 56).

Therefore, accepting the idea of a global functioning of the person and the concept of health no longer as the absence of disease but as the product of the interaction between diversified factors aimed at guaranteeing conditions of well-being, leads to attributing a different meaning to the teacher and to her teaching: didactics becomes a complex process capable of expanding the opportunities for inclusion and an expression of an educational intention whose purpose is to stimulate the learning process in each pupil. This path of knowledge, however, can only take place respecting individual differences and requires the presence of knowledge that detaches itself from historical and cultural bonds dominated by theological and Cartesian dualisms; a type of knowledge that is open to a continuous redefinition of its borders and affirms an idea of education capable of enhancing the dimension of the body and mind. A new educational approach, in other words, which includes the analysis of all the sense-perceptive, psycho-motor and affective-relational dynamics of the person who, in their being complementary and interdependent, define their own identity.

On the basis of these preconditions and starting from the analysis of the main theoretical paradigms that consider the body-kinesthetic dimension fully legitimate in the learning, emotional and relational processes of the person, in his constant interaction with the environment, a reflection on the inclusive role of the body and movement in teaching is proposed, with particular attention to the vicariant aspects of body action and the potential of *unaided* communication which, harmoniously and simultaneously, can converge in the didactic-educational itineraries focused on augmentative and alternative communication in the school environment.

2. Educating towards corporeality

The interdisciplinary interest in the role of the body and movement in learning processes and the recognition of the inclusive potential of a didactic action aimed at enhancing every dimension of the child from the early years of childhood, has contributed, albeit gradually, to a new vision of teaching-learning processes both on the basis of the results of neuroscientific and psycho-pedagogical researches, and on the basis of new interpretative models of disability centered on empowerment and the capacity of the person’s self-determination (Sen, 1985; Nussbaum, 2011; Cottini, 2016).

Having gone beyond the reductive vision of a body detached from one’s mind, scientific research has gradually directed its investigations towards a complex study of the functioning of living organisms both with respect to the specificity of their physical, cognitive, affective and relational functions, and in relation to the context of which they are an integral part. The first studies on psychomotor skills, which identified the preferential dimensions for the education of the child in corporeality and movement, recognized the importance of functional paths for healthy and harmonious growth. The body was no longer considered only in its organic and mechanical guise; instead, they valued its sensory-motor, perceptual and affective aspects as the basis of learning.

In his initial definition of psychomotor practice, Henri Wallon linked the origin of thought to the direct experiences of the subject and stated that “tone and motor skills contain in their development the first features of emotional and affective reactions, contributing to the progressive organization of knowledge” (Aucouturier, B., Darrault, I., Empinet, JL, 2009, p.11). Although in agreement with him, Jean Piaget recognized that “at every level, action always presumes an interest that provokes it, whether it is a physiological need, or an emotional or intellectual need [...] mental life, like organic life itself, tends to progressively assimilate the surrounding environment, by means of psychic structures or organs” (Piaget, 1967, pp. 12-16).

Perceptions and movements first, memory and practical intelligence subsequently, favor from the earliest stages of development that process of change that is generated with every external variation, an adaptive path that is the result of a progressive game of balance between assimilation and adjustment and which recognizes, already in the reflex, an authentic activeness of the person instead of his passivity; this demonstrates the existence of an early sensorimotor assimilation. Both approaches, although fundamental to understand the psychic development of the child, were lacking didactic purposes, on the contrary, referring to its entirety means “respecting a unitary activity of motor skills, affectivity and cognitive processes [...], his absolutely original way of being in the world, of living it, of discovering it, of knowing it, all at the same time” (Aucouturier, B., Darrault, I., Empinet, JL, op.cit., 2009, p. 29).

Pedagogy, based on these theories, requires an educational intervention that is sensitive and attentive to the spontaneity of the child, to the symbolic value of gestures, to the authenticity of his being body-mind-emotions: because “it is right through the processes of spontaneous motor adaptation that thought processes will arise: the child will discover a certain number of abstract notions that he is capable of using as intellectual structures long before he can express and verbalize them” (Lapierre, 2001, p. 20). This spontaneity of acts, in which forms of cognition, emotional experiences and relational needs are expressed, shifts the axis of psycho-pedagogical reflection towards the construction of learning environments tailored to the child. These can be considered as places of making and action, spaces in which the body in action becomes a medium of knowledge and communication with the other. Not only in therapeutic contexts, but also in contexts usually intended for education and instruction, it is possible to develop paths oriented towards the discovery and knowledge of one’s own body.

The passage from sensory-motor concreteness to the abstractness of thought can be pursued through forms of playful, gestural, graphic-pictorial and verbal expression that allow, thanks to the body in motion, the construction of the foundations of a pedagogy of discovery of which children are active protagonists: free and creative activities, spontaneous choices of objects and materials, sensory and motor games, become an integral part of a form teaching that educates to freedom, which gives the pupil the opportunity to express himself through the body. This type of teaching identifies in action one of the first expressions of the emotional and psychic life of the child, this demonstrating the existence of an “*absorbing mind*” whose original functioning allows the child to acquire knowledge in a completely natural way (Montessori, 2015, p. 25).

The new pedagogical theories, strongly focused on respecting the spontaneity and innate potential of the person, even in the presence of disabilities, provide teaching an opportunity to renew itself on a methodological level. The teacher-observer has the task of adapting to his pupils, to their degree of development and to the subjective characteristics of each one, minimizing his own intervention and enhancing the child’s doing and acting, in the awareness that thought emerges from “a situation actually experienced” (Dewey, 1968, p. 170). Cognitive development, in its many expressions, therefore stands as that “process that goes both from the outside to the inside and from the inside to the outside. It largely consists of the fact that the human being binds himself to boosters of his motor, sensitive and reflexive capacities transmitted by a culture” (Bruner, Olver, Greenfield, 1968, p. 18): education, as a tool of culture, has the task of welcoming the different dimensions of the person. It must give the adult the educational responsibility for being a support and a facilitator of learning mainly mediated by the body, sensoriality and motor action located in the environment.

The environment becomes the place where the action of the body expresses itself, but also the space where the harmonious development of the person takes place; a development that appears to be the result of both a biological and a social maturing process in which the child’s psychic functions appear twice; “the first time in collective activities, in social activities, that is, as interspsychic functions; the second in individual activities, as internal properties of the child’s thought, that is, as intrapsychic functions” (Vygotskij, Lurija, Leontjiev, 1970, p. 37).

3. The body in action in teaching

The psycho-pedagogical reading of learning processes and the analysis of the constant relationship that the person has with his or her living environment has been enriched with new theories that recognize the inseparability of mental processes from the sensory and motor skills. Emotions also play a central role in the experience of knowing, thus outlining new educational research scenarios on the body and movement with interesting repercussions in the educational field and for disability. The functioning model of the mind that according to the cognitivist approach was linked to the image of a computer-brain, gives way to an idea of human knowledge to be investigated from a biological perspective: “every cognitive experience involves who gains knowledge in a personal way, rooted in his biological structure, whereby every experience of certainty is an individual phenomenon, deaf to the cognitive action of the other” (Maturana, Varela, 1999, p.38).

In the enactive perspective, we recognize the existence of a circularity between experience and action which contribute, in their being an inseparable binomial, to the building of knowledge that is realized thanks to perceptual mechanisms and individual action schemes. Every experience is indissolubly linked to our biological structure and every cognitive phenomenon cannot be said to be such if conceived as something other than us: each individual finds himself in a relationship of co-adaptation and reciprocal influence with his environment and shares transformations and changes with it (Caruana, Borghi, 2016; Rossi, 2011). In this constant game of actions, relationships and inter-relationships, in which the context does not act as a “selector” but provides a structure ready to welcome change with opportunities for it, it is evident that these modifications appear as true acts of cognition: the process of co-evolution and co-construction between the subject and his environment, circular and dynamic, is based on the willingness of the subject in action to learn.

In this sense, research, in the field of bioeducational sciences, has internally combined the results of biological, psychological and neuroscientific reflections and takes credit for having reconfirmed an image of the individual as an autonomous and interactive system. According to bio-educational sciences, each individual has a brain plasticity that allows him to remodel his development through a process of organization and reorganization of his brain network. Development and learning do not only belong to the biological dimension of the person but are linked to the feedback systems that he receives from the environment in which he lives. Specifically, if “the subject carries a qualitatively differentiated and quantitatively increasing genetic potential [...], this means that the functional orientation can be enhanced by the environment on his biological basis” (Frauenfelder, Santoianni, Striano, 2004, p. 7).

The transposition of these approaches, in the educational field, leads to a reflection on the role of teaching, on the construction of learning environments and on the need to provide the growing subject with appropriate stimuli or, on the contrary, on the risk that they are not sufficiently adequate. It is necessary to recognize a learning potential that is an integral part of everyone and can overcome the limits imposed by a disability so that the person can receive all the opportunities for education and training in compliance with his different response times to the stimulations received. Indeed, each individual is an example of an adaptive system that redefines and restructures itself while preserving its biological identity.

The mind presents itself in its total complexity, it appears closely linked to the variability of the subject, to its different learning strategies but also to the wide range of stimuli that each context can offer. The teaching procedure based on the principle of a body in action and interaction with the environment, must be linked to an idea of teaching that does not neglect the student’s willingness to learn through various methods that are connected to his interests and emotions (Gomez Paloma, 2004; 2013). Recent scientific research has recovered the emotional dimension of the person and re-evaluated the influence that emotions can have in the learning processes and in the relational dynamics with the other: “they have given shape, for the first time in human history, to what has always been a source of profound mystery: they have shown

us the functioning of this intricate mass of cells at the very moment in which we think and feel, imagine and dream” (Goleman, 1996, p. 14). These new studies have therefore determined, also in the educational field, a more careful analysis of the relationship between body-emotion and conscience, showing us how “emotion and related reactions side with the body, while feelings with the mind” (Damasio, 1995, p. 18).

The same studies have recognized the neurophysiological bases of emotions, they have explained how each of them is linked to cerebral circuits that hold a wealth of innate behavior that guide our actions and that have protected us on the long road of evolution; but, at the same time, the new studies have also highlighted our fragility and our vulnerability. This leads us to reflect on the management of emotions that can overwhelm our reason and hinder our way of learning and remembering. The rational mind is the custodian of awareness and reflection, it dialogues with the emotional, irrational and impulsive mind, in a constant game of balance and inter-connections that guides the person in his actions and in his personal choices. However, in that delicate transition from bodily sensation to awareness of emotion, emotional memory becomes the custodian of that heritage of experiences that belongs to the person from birth, shapes his being and his way of being in the world. This archive of emotional impressions and memories, of which we are not fully aware, leaves indelible traces on the individual, contributing to the definition of his emotional sensitivity (LeDoux, 2003).

The theories on emotions call for a new approach to teaching focused on recognizing the emotional states of their pupils, starting with the awareness that an unheard body will be the guardian of an emotion that is not understood, sometimes rejected. Negative emotions will affect the well-being of the person and, therefore, it is clear how urgent educating towards emotions is, how necessary it is to become “emotionally intelligent” in order to acquire the ability to manage impulses but also be able to channel positive emotions towards the achievement of a purpose. Every social relationship is dominated by emotions that can shape our mind and affect our body (Fedeli, 2013; Cottini, 2017): education to emotions is first of all an education to corporeality that must be based on the recognition of the relationship between physiological, cognitive and behavioral states, and requires both the teacher and the pupil to be willing to listen to the other, to understand his feelings in order to “tune in emotionally”.

4. Unaided communication and vicariance in AAC

The intertwining of the social and individual dimensions of learning and emotions finds its expression in verbal language, configuring the linguistic abilities of the person as one of the many aspects of cognition that is rooted in the body. Language, like corporeality and movement, has innate components, located in the biological dimension of the individual and aspects that are attributable to society and to the set of relationships favored by it (Bruner, 1985; Chomsky, 1990). But what happens when forms of severe disability prevent the person from using verbal language to share thoughts, emotions and moods? How can educational actions converge in the direction leading to the inclusion of the person? Probably starting from the principle that relationships are not defined only by verbal communication but by a multiplicity of aspects that involve the dimension of the person’s body and movement and that can be supported by strategies and tools capable of facilitating alternative ways to access knowledge.

People with multiple disabilities and with motor, sensory and intellectual difficulties, both at school and in clinical settings, can be severely compromised in their way of interacting with others, especially in the absence of verbal language. This permanent status, in addition to making the person less autonomous, affecting his self-esteem and his sense of self-efficacy, constitutes a highly disabling aspect for the person who needs to be supported on the communicative level through augmentative and alternative communication protocols. These are based on the exchange of symbols between one or more communication partners and allow the non-verbal users the opportunity to express and share their needs, thoughts and emotions (Gava, 2007).

A widespread trend in education is to consider the use of different symbolic systems (PCS, WLS; BLISS) as a simple use of symbols to be exchanged with each other, or useful to flood the surrounding environment by believing, in this way, to make it more communicative or to “communicate”. The strategies attributable to this specific field of research, on the contrary, are based on the idea that communication is first of all corporeal and, in the communicative exchange with the non-verbal adult or child, it is necessary to value all the closely related aspects to his innate predisposition to express himself through the body: just as we will never ask a newborn of a few months to place an object, recognizing in him a cognitive and bodily immaturity, in the same way in the approach of AAC the teacher, the therapist or the adult of reference in the family context will have to start from the understanding of the expressive possibilities offered by *unaided communication* (Cafiero, 2009; Costantino, 2011).

Moreover, there are many approaches that have identified corporeality as the first elements of communication and have replaced the traditional distinction between “verbal and non-verbal communication” with that of Bodily communication or “body language” (Argyle, 1992; Birkenbihl, 2016). This expression has been used to indicate that path of interaction between two or more individuals in which the set of gestures and postures, the movements of the head and eyes, the intonation of the voice and simple vocalizations take on a communicative value. The body, therefore, like a theater with its actors, is transformed daily into a stage on which the person’s emotions are manifested: in fact, “activity or inactivity, words or silence all have the value of a message: they influence others and others in turn, they cannot fail to respond to these communications and in this way they also communicate” (Watzlawik et al., 1971, pp. 41-42).

The behavior of the subject, in its entirety, in every interactive situation has, therefore, the value of a message and the body expresses and shares what belongs to its most intimate and inner dimension and facilitates, through facial expression, the reading of those emotional states that, even before being explained, find their highest expression on the person’s face. (Kendon, 1994; Ekman, Friesen, 2007). In this direction, AAC from the augmentative point of view, welcomes and enhances the body heritage of the non-verbal user or with limited communication skills and recognizes the importance of attributing meaning to the set of body signals that have an influence on the communicating partner: a smile, a nod of the head, a movement of the eye, a prolonged look on the symbol, have the effect of producing an immediate reinforcement; from being unaided, communication becomes *alternative* when it supports the user with a specific tool or aid (tables, agendas, eye communicators, etc.). Their use will offer the person, with complex communicative needs, the possibility to integrate body communication with tool communication which, also in this case, will see the central role of corporeality and movement in all those communicative moments where grasping the pictogram, indicating the symbol with a fist, and pressing the pointer helmet on a keyboard connected to an aid with voice output are required (Beukelman, Mirenda, 2014).

These body signals, supported by the symbol in its paper or digital form, can be interpreted as concrete requests for listening, attempts to signal attention and understanding, channels through which to express agreement and approval as well as an opportunity to establish moments of emotional harmony with one’s partner: the symbol becomes a visual and tangible support for a type of communication which, first of all, manifests itself through the person’s facial expressions and gestures. The body-kinesthetic dimension in a didactic-educational itinerary centered on AAC, constitutes the basis for the manifestation of intelligent forms of the person, the application field in which “the skills implied by an intelligence can be used as a means to acquire information” (Gardner, 1987, p.469), the space of the educational relationship in which the pupil can use his own body in different and skillful ways, as well as for expressive and communicative purposes, also for practical purposes.

The body, through AAC, translates cognitive action into behavior and, from the very first interactions with communication partners, manifests the representative capabilities of our brain. Indeed, it “can simulate actions to predict the consequences and choose the most appropriate” (Berthoz, 1998, pp. 12-13) and, at the same time, can simulate the behavior of the other in the

very moment in which we perceive his first movements. The latter “communicate something, that is their meaning of act” (Rizzolatti, Sinigaglia, 2006, p.148): a mechanism that would be at the basis of forms of inter-individual communication and of the body’s ability to enter in synch with the other (Gazzaniga, 1990; Gallese, Ammaniti, 2014).

In this original way of the body acting and of the mind thinking, which is based on a dynamic interaction between perception and action, teaching has the task of enhancing the visual, tactile and perceptive path, recognizing the importance of the “vicariance of the gesture”, the vicarious function of one hand replacing the other, the possibility for each to “simulate the act, to find alternative strategies or to organize another movement capable of carrying out the same task - functional vicariance - or even to invent new actions , unpublished in the normal functional repertoire” (Berthoz, 2015, p.27). In this direction, “the vicar - who animates the teaching-learning process - appears as a potential ability of the subject that manifests itself in the presence of specific needs for which replacement solutions are required” (Sibilio, 2017, p.19). The teacher’s task, therefore, will be to enhance the body’s vicarious and communicative potential as a first strategy to favor and implement the opportunities for the pupil’s communicative exchange with the class group, helping him to compensate for the deficient skills with tools more suitable for its personal operation. The aim is to minimize that “systemic bubble” (Hall, 1969) which often comes up between us and the other and which, in the case of disability, is not always the direct consequence of an intentional action of the person but rather the outcome of a communicative one not understood.

Movements and responses of the body take on enormous communicative value but their potential is also linked to the ability of the communication partner to interpret: every signal, whether intentional or not, must have a meaning for the environment. At the same time, the pupil with complex communication needs must be able to experience in every context of life, including school, the pleasure deriving from feeling understood: perceiving that one’s own bodily behavior has an effect on the world can constitute, in fact, the first step in the development of intentional communication.

5. Conclusion

The inseparability of the mind-body-emotions relationship pushes teaching to a continuous redefinition of itself and of its own practices which, working towards greater inclusiveness, must be directed to the creation of learning environments increasingly responsive to different educational needs emerging in the classroom. In particular, the learning abilities of the body suggest educational itineraries that are more attentive to the experiential dimension of the subject being educated and to his educability, the result of a natural aptitude to learning and knowledge. This requires for an interdisciplinary read, on behalf of the teacher, of the cognitive processes of the person and his individual ways of being and acting.

The idea that the educational-learning functioning can be the result of the twist between biology, the subject’s initiatives in the environment and relationships, shifts the focus of reflection on the mediating role of the teacher; his task is to be a facilitator of knowledge and interactions with one another, a role that becomes even more evident in the presence of pupils with disabilities. Recognizing the potential of the body and the existence of a vast set of signals that can take on the value of a message, requires the teacher to have a multidisciplinary training that can help him in the delicate task of building educational contexts capable of gratifying the pupil’s communicative efforts.

The use of augmentative and alternative communication strategies can have significant implications in the educational field: through the use of the body and the symbol, the student can find original opportunities for sharing thoughts, needs and emotions; new forms of emotional harmony with the teacher and the peer group; greater opportunities for sharing in recreational and game-sport activities; new ways of accessing learning mediated by tools and aids that

enhance the body and movement, support communication, clarify it and make it a process that can be shared in any social context. AAC, in other words, can constitute an interdisciplinary research space in which to continue to reflect on the inclusive potential of the body and movement with the aim to improve the self-determination skills of those people with severe communication disorders and the quality of their life.

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