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OUTDOOR EDUCATION AS A NATURAL RESOURCE FOR EMBODIED COGNITION IN TEACHING PRACTICES

L'EDUCAZIONE ALL'APERTO COME RISORSA NATURALE PER LA COGNIZIONE INCARNATA NELLE PRATICHE DI INSEGNAMENTO

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Abstract

This work aims to promotes the concept of integrated education, assigning great importance to the outdoor environmental that it could strengthen the children growth and, in particular, their autonomy, freedom and creativity in relation with thinking and acting processes in a prosociality way. The proposal to go back to the roots of human nature and in the surrounding environment is particularly valid for both children who live in rural environments and for those in large cities which, by their nature, do not always favor the balanced development of all. the human dimensions for the growth of the person. Outdoor Education is proposed as a pedagogical orientation which consists in making the most of the opportunities of being out (out-door) and of conceiving the external environment as a place of training. Being able to experience firsthand one's connection with nature becomes a healthy and positive experience for the child, transversal to all its developmental dimensions.

The term "Outdoor education" does not refer exclusively to experiences carried out in natural contexts (gardens, farms, woods, etc.) but also to educational courses carried out in urban environments (archeological areas, squares, city parks, etc.) in which they are guaranteed a direct relationship with the real world and the full involvement of the trainee (cognitive, physical, affective and relational dimensions).

The solicitation offered by the contribution of the Embodied Cognition (Gomez Paloma, 2017), which in overcoming the traditional philosophy of mind setting, refers to various disciplinary specifications (cognitive, educational, motor, aesthetic sciences), considers the important role of the body , since the student's corporeality, with its cognitive sphere, always interacts dynamically and positively with the surrounding environment, if this is qualitatively effective.

Il presente lavoro si inserisce all'interno di quel campo che promuove il concetto di educazione integrata, assegnando grande importanza alle circostanze ambientali che rafforzano la crescita del bambino e, in modo particolare, la sua autonomia, libertà, creatività nel pensiero e nell'agire e la sua prosocialità.

La proposta di tornare alle radici che sostano nella natura umana e nell'ambiente circostante ci risulta particolarmente valida sia per i bambini che vivono in ambienti rurali sia per quelli delle grandi città le quali, per loro natura, non sempre favoriscono lo sviluppo equilibrato di tutte le dimensioni umane per la crescita della persona. L'Outdoor Education viene proposta come orientamento pedagogico che consiste nel valorizzare al massimo le opportunità dello stare fuori (out-door) e del concepire l'ambiente esterno come luogo di formazione. Poter sperimentare in prima persona il proprio legame con la natura diventa per il bambino un'esperienza sana e positiva, trasversale a tutte le sue dimensioni evolutive.

Il temine «Outdoor education» non si riferisce esclusivamente ad esperienze svolte in contesti naturali (giardini, fattorie, boschi, ecc.) ma anche a percorsi didattici realizzati in ambienti urbani (musei, piazze, parchi cittadini, ecc.) nei quali sono garantiti un rapporto diretto con il mondo reale e il pieno coinvolgimento del soggetto in formazione (dimensioni cognitiva, fisica, affettiva e relazionale).

Le sollecitazioni offerte dal contributo dell'Embodied Cognition (Gomez Paloma, 2017), che nel superare la tradizionale impostazione della filosofia della mente, rinvia a varie specificazioni disciplinari (scienze cognitive, educative, motorie, estetiche), considera l'importante ruolo del corpo, poiché la corporeità dell'allievo, con la sua sfera

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cognitiva, interagisce sempre dinamicamente e positivamente con l'ambiente circostante, se questo è qualitativamente efficace.

Keywords
Outdoor Education; Embodied Cognition; corpo; spazio.
Outdoor Education; Embodied Cognition; body; space

1. Introduction

A considerable extension in terms of educational opportunities is given by the possibility of moving from indoor education, i.e. carried out inside a building, to outdoor. This work intend to provide a brief contribution regarding the study that the interaction between body and environment, in terms of Embodied Cognition, can benefit more through the study and development of methodologies that influence cognition through activity of the mind and in particular of its perceptive activity when the environment where the teaching-learning process takes place is outdoors and is used as a scientific education laboratory (Farnè, 2019). It is important to note that outdoor education is not an educational fashion [...] because fashions pass. Outdoor education is a way of doing education (Ibidem) that will hardly fade because the desire to learn, study, play or simply being outdoors is inherent in mankind, and as the pandemic and the various lockdown phases have shown, it is to be considered a primary asset. In Italian the term that is generally used to describe this way of operating is outdoor education in Italian, however the English term is used above all to rely on the well-developed international research framework that is linked to the so-called Outdoor Education (OE) concerning formal, non-formal and informal educational theories and practices that are characterized by the centrality of the learning place which is always an external environment (Ibidem). It is important to establish from the outset that Outdoor Education does not accurately determine what a teacher must do outdoors, which or how many activities must be carried out outside and not by any prescription. Based on five W rule (Who, What, Where, When and Why) Outdoor Education mainly focuses on Wherethat imperatively becomes the external environment and on Why or why outdoor practices bring benefits. to the learner and that learning on the outside is as important as the internal environment (Ibidem). According to Farnè, this reflection is based on an observation that is that children suffer from confinement, at least to a certain degree that varies from learner to learner, when they are inside the school walls it is clear that the children in the outdoor spaces are fine. and this is for a biological factor. The empirical evidence supported by numerous studies and research that reminds us that the teaching-learning process is both cultural and biological is certainly not new (Frauenfelder, 1986, 1994, 2011; Sibilio, 2014). Recognizing that it is clear that children are fine when they are outside, it is necessary to create the conditions for children to do outdoor activities (Farnè, 2019). Going outside is not an hour of fresh air to give them a moment of freedom but planning outdoor activities and taking on the external environment from the point of view of pedagogical intentionality, truly believing that the external environment is an environment of 'learning (Ibidem). Besides, a learning environment is, fist of all, a living environment is first and foremost a living environment where learners are allowed to have meaningful experiences. In this educational vision, the teacher plays a key role. The aim of investing the external environment with educational potential (Ibidem), at the same time the learners will be able to carry out activities that involve the body more, in general more dynamic capable of setting in motion curiosity. Farnè points out that the attention spans of a child who thinks he is doing an activity that he considers interesting are attention spans that are impossible to have by keeping them seated at a table (Ibidem), but at the same time he reports an interesting but worrying study. Which highlights that the majority of childhood and primary teachers in Italy still use, if not infrequently, the outdoor space as a didactic environment. It must also be said that school buildings and access to parks and other green areas by Italian schoolchildren

are also not very easy for Outdoor Education. To understand the extent of the problem, Farnè asks how mush viable is a city, from the point of view of a child? (Ibidem) And the answer is in general that in a city almost nothing is done to the size of a child who comes instead considered by teachers, school principals, parents and educators in general full of risks. It is precisely the perception of risk perception has reduced outdoor education in Italy due to fear effects on adults, more or less rightly motivated by adults who have the task of supervising educational activities. In some cases this certainly well-founded fear is sometimes amplified and causes a negative consequence. Summarizing, children are expropriated of a series of experiences in social and natural environment such as historical, artistic places with a consequent potential loss of learning and skills (Ibidem).

2. Outdoor Education

In recent years, the scientific literature, in the field of pedagogy, education and developmental psychology, has dedicated particular attention to the study of Outdoor Education (OE) and its implications for what concerns the physical and psychological development of the child. OE has been described as an environment-focused educational approach characterized by action-centered and thematic learning processes that often involve outdoor activities (Dahlgren & Szczepanski, 1998, p.3). Higgins (1995) refers to Outdoor Education as education "in" (outdoor activities), "through" (personal and social education), "about" (environmental education) and "for" (sustainability) the natural environment. These definitions underline the strong link between Outdoor Education and the external environment in which the activities take place. The beneficial effects of Outodoor Education on the child's development are confirmed by more general evidence (Walls & Evan, 2003) that spending time in a natural environment offers a range of health benefits for humans. For children, some effects may be due, at least in part, to their greater neuronal plasticity (Ibidem).

The natural outdoor context represents the ideal environment to improve the child's health; the same scientific literature has amply demonstrated that the promotion of outdoor play can have a very significant impact on physical aspects (Harrington & Brussoni, 2015), such as (mainly): a better impact on blood pressure, less cholesterol and improve bone density (Lewika and Farrell, 2007; Copeland et al., 2012) and contributing to the reduction of childhood obesity (Raustorp et al., 2012). Furthermore, physical activity outdoors can lead others positive effects compared to activity carried out in a closed context (Thompson Coon et al., 2011; Pesce et al., 2016), such as a lower risk of developing chronic physically and mental health problems (Strong et al., 2005; Mitchell, 2013).

Promoting healthy behaviors and attitudes favorable to physical fitness (Bandura, 2004; Barnett et al., 2006) is determined by movement and physical activity in natural environments; the same activities carried out outdoors offer the opportunity to experiment with exploratory behaviors (Weber, 2010; Mahdjoubi and Akplotsyi, 2012), strengthening the locomotor and immune system.

In terms of social relationships, outdoor activities promote social cohesion, reduce conflict dimensions and stimulate the development of a sense of autonomy and self-efficacy (Kaplan and Kaplan, 1994; Moore, 1996). Outdoor Education stimulates intelligence and improves mental concentration, reflection and memory (Basile, 2000; Hartig et al., 2003; Szczepanski, 2007); within primary school contexts it has been recognized that such activities improve peer work, leadership development, problem solving skills and attitudes, reducing antisocial behaviors (Pyle, 2002; Malone and Tranter, 2003).

Based on the various researches (elenco citazioni), it is not, however, easy to implement the Outdoor Education and the same relationship that exists between the activities and the outcomes of the child's development will not necessarily be linear; in fact, there are several factors that could influence and act as moderators, such as child temperament, sex, socio-economic or health status of the family and the same mental health of the latter (Ulset et al., 2017). Many factors could be the barriers related to architectural structures (Ibidem) and / or the unavailabil-

ity of objects and materials to be used in outdoor places (Brown et al., 2009).

Additional variables that could moderate the relationship between outdoor activities and the promotion of the child's psycho-physical well-being are the quality of the relationship between teacher and pupil (Tonge et al., 2017) and the perceptions that parents and the same teachers have on the importance of Outdoor Education (Insenberg, 1990; Kagan, 1992; Pjares, 1992; Fang, 1996). Studies have shown that parents understand the effectiveness and benefits of games in natural spaces, appreciating the latter much more than urban ones (Wang et al., 2018); with regard to the perspectives of teachers (Mc Clintic and Petty, 2015), the beliefs of teachers who recognize the countless opportunities for experimenting free play that an outdoor activity can offer, but, nevertheless, recognize some limits in being simple supervisors of activities, thus weakening the external environment as a context for the child's development.

The pedagogical orientation of the Outdoor Education does not prescribe educational activities or paths that must be implemented or what objectives must be achieved, all of this relates to the specificity of the educational context (school or extra-curricular) and the choices of teachers and educators. The Outdoor Education places "simply" the accent on one point of view: that of making the most of the opportunities of being out (out-door) and of conceiving the external environment in itself as a place of training (Farné, 2014). Going outside is a starting point (Farné, 2015), a precondition that takes as a priority a change that we could define as epistemological with respect to what is the normal form in which education / instruction is conceived and implemented in our society: its being that is "performed" on the basis of indoor spaces (Ibidem).

Since 1979, Réné Schérer and Guy Hocquenghem wrote that is, who lives outside some familiar, scholastic, and generally surveillance plot, is strictly unimaginable, because he is unavailable. The child who moves outdoors would, in reality, be completely at ease; children have always had in the "outside spaces" the elective places for their socialization and for their games. This condition was completely normal, today destabilizes the adult because the external environment has become dangerous, unhealthy, unsafe, unsuitable and inhospitable for children unless under close supervision of adults. Allowing or improving habitability or accessibility for children in an outdoor environment have as impoct that an educator must changed it because It influence risks correlated with outdoor childrens' experiences and insecurity who, on the contrary, often tries to test himself, to know his abilities and limits, but the adult who sees the conditions that determine control over each child in crisis. In a space that is not contained and supervised. The child outside - write Schérer and Hocquenghem (1979, pp. 54-55) - is difficult to think. In every hour or so of the day the child is entirely defined in a certain field whose structure is more or less elastic for him. But it is always imperative, spatially and temporally determined. He must be located somewhere, he must always be able to tell where he is and be accountable for what he has done or is doing .

Franco Fabbroni and his research group of the University of Bologna said that (Farné, 2012), in the pedagogical field, between the seventies and eighties, it was possible to see an enhancement of extracurricular education and the concept of integrated training. The concept of decentralized teaching room as an educational environment promotes on the one hand a systemic and open vision of teaching that no longer saw in the classroom the exclusive place of the teaching / learning process, on the other a polycentric vision of "classrooms" however structured: museum, library, playroom, theater etc.

The Outdoor Education's perspective also goes in the direction of lowering the centrality of the school-space as an "exclusive" place for didactic processes, but places the external environment as an evocative and privileged space for training experiences, such as the garden or the schoolyard. Children who attend primary school are not allowed to spend the short time of recreation outdoors, nor are they engaged in outdoor physical activity; while in kindergartens the use of outdoor space is minimixed. Children live in a condition that we could define as house and school arrest if we make a quantitative account of the time-budgets they spend closed at home and at school; and the quantitative data takes on an evident qualitative meaning from the point of view of the impoverishment and weakening of the countless fields of experience (Farné, 2015).

Research from the University of Essex in 2011 (Farnè, 2015) reports alarming data: in 10 years the strength of the arms of children has decreased by 26%, thus reducing the basic psychomotor skills acquired during early childhood and the lack of time spent in open air increase the rate of childhood morbidity (Mulato & Riegger, 2013). It is important to point out the degeneration of the concept of prevention, fundamental in anyone with any educational task, into overprotection. A manifestly anti-pedagogical drift action consists in expropriating the child's experiences rather than allowing them in an age-appropriate manner, also assuming that physiological margin of risk that every experience directly and concretely involves, since the risks can be run, the dangers we try to avoid them. But the possibility of distinguishing between risk and danger, in the process of maturation of the subject, is not given objectively, but subjectively on the basis of previous experiences and what they have taught to those who have lived them directly (Farné, 2015). Practicing Outdoor Education also means redefining the interior space as a place for decanting experiences, for processing knowledge through the appropriate languages; it means bringing in what one has found / felt outside, where "inside" also means within oneself as a lived experience. Outdoor Education is one of the modalities on which the great tradition of pedagogical activism was formed which, in Italy, some significant experiences (especially in the field of educational cooperation movement), has never become part of the style and the professionalism of our teachers (Ibidem).

Being outdoors in itself could leave perplexing those who, animated by a pedagogical intentionality of content (What do you do? Why? With what objectives?) believe that the Outdoor Education lends itself to ideological drifts of a spontaneous type. But allowing children to spend meaningful time outdoors is the fundamental condition for entrusting themselves with autonomy of action and relationships that are not possible indoors. The Outdoor Education is, in fact, education, that is, it presupposes that there is a pedagogical intention that guides being outdoors. This is where teaching professionalism comes into play, since it is not simply a matter of organizing a visit to the museum or a fully planned educational outing. The Outdoor Education works whenever it develops the curiosity, experimentation, exploration of the child, making it active through lines of "research" suggested by the adult. The formative adventure is the climate that animates the Outdoor Education, which does not mean improvisation, but a minimal and accurate preparation of what is useful, then leaving the search for the solution of problems to exploratory freedom.

The weak programming required provides a long time to give children the opportunity to move, observe, explore. The didactic test will focus on the questions that the children will be encouraged to ask and on the answers that they themselves will elaborate through mutual comparison and didactically stimulated by the teacher. Alberto Manzi (Farnè, 2011) every year go with their class to spend a week in the countryside, in Maremma, or on the Gran Sasso or on an island:a period where school was taught by living in that particular environment and learning everything that that environment offered in terms of experience and knowledge (Farnè, 2011). His classroom, in the Fratelli Bandiera elementary school in Rome, was a large room on the top floor with a door that opened onto a terrace that was the roof of the building; everything was a classroom: inside, where there was the necessary didactic furniture, and outside, where there were cultivated plants, work tools, aquarium and terrarium with insects, etc. and the activities unfolded in or out seamlessly. I can teach children the water cycle, Alberto Manzi said, and if I do it in a didactically adequate way, children understand and learn it. But if a child has had the experience of rain on his face, that learning will be different.

Define the concept of "environmental education" on the basis of different disciplinary and interdisciplinary knowledge, didactic units, taxonomies; but it does not mean simply declining the learning in a series of specific checklists, rather it is necessary to consider the direct taking of the environment, i.e. the possibility of experiencing what the space is able to offer or what prevents you from doing, experiencing this that it is offered to the senses and to the imagination (Farnè, 2015).

3. Body/environment interaction: Embodied Education and new learning spaces

The phenomenological concept of Embodied Education (Francesconi & Tarozzi, 2012) recalls the idea of a body consciousness that does not develop naturally, but must be educated. Experiencing one's interiority, becoming aware through action and the relationship with the environment, invests our mind and our cognitive action; the combination of concrete experience and cognitive functions determines a dynamic integration between mind and body (Francesconi, 2011).

The perspective shifts, as already intuited by Merleau Ponty (1962), from the final product of human behavior, to the fundamental role of the body and subjective experience in the construction of knowledge and self-awareness. In this way, the importance of human experience, using an ecological approach of the first-person perspective emerges and the consequent detachment from the idea of objective reasoning, rigidly expected, to move on to the idea of reasoning. in situation, where the concrete relationship between subject / object is realized (Francesconi et al., 2012). An effective motor behavior is achieved through interaction with reality, in a cognition acted upon in the very development of the experience; the bodily experience, in the present moment of the here and now, manifests that mind has a the vital form (Tarozzi, 2008) able to understood and describing as cognition produced by the continuous interaction between body, environment, situation, that is personal history that inevitably recalls the experiences previously lived in order to open up to future change (Cescato, 2015).

Cescato (2015) states that, the conscious presence, which is innate, is lost in the course of development, all the more reason the child must be facilitated in the free exploration of the world, in doing what he wishes to do, involving his embodied ego thanks to the body, movement and the magic phase of kinesthetic-bodily intelligence: It is a question, in line with the theoretical perspectives discussed above, of trying to devote to what happens that specific attention that we tend to lose when we we find ourselves involved in situations, especially if routine, to which we respond by activating a sort of automatic pilot. (Cescato, 2015, p.7).

In the embodied perspective, body and action emerge not only in the concepts of body consciousness and body identity but also in the constructs of learning, intelligence, memory, emotion (Stern, 2005; Fischer, Daniel, Immordino-Yang, Stern, Battro & Koizumi, 2007). The epistemological dimension is moving towards the recognized and primary importance of lived experience, that is, of a situated mind, embodied, connected to the environment (embedded), involved in social relations (extended) and enacted (Clark, 2008; Varela et al., 1991). These interpretations of the mind can be traced back to a common thesis: mental activity does not depend only on the brain, but also on the body (Francesconi et al., 2012, p. 268). The child, for example, is naturally embodied in her action, predisposed to an attentive and intentionally conscious attitude, if he is left free to act in the world around him. The freedom to live experiences, in childhood, guarantees the emotional-relational dimension which is so important for acting, thinking and thinking about acting (Ceciliani, 2015, p. 32) which testify to the intentionality of intelligent behavior. Several evidences recall the important role of the body-movement in infantile cognitive development (Thelen & Smith, 1994; Campbell, Eaton & McKeen, 2002; Sommerville & Decety, 2006; Robertson & Johnson, 2009). The ontogeny of human development does not originate in abstract cognition, centralized and separated from the context, but is intrinsically anchored to a cognition centered on perceptual-motor processing, on sensory-motor intelligence (Piaget, 1952, 2018) or kinesthetic-corporeal (Gardner , 1987). The theory of dynamic systems and embodied cognition (Smith, 2009; Thelen et al., 1994) have emphasized the contribution that the child's body and actions make to learning and cognitive development, considering the sense processes as fundamental. senso-motors, in the complex body-mind-environment interaction, for the formation of cognitive representations.

The recent scientific paradigm of Embodied Cognition (EC) (Gomez Paloma, 2017) may be able to offer interesting conceptual and operational insights in order to cope with the complexity of training processes. The EC represents the synthesis of various interdisciplinary contributions, ranging from cognitive psychology (Bersalou, 2008; Fisher, 2012; Caruana & Borghi, 2013) to

the phenomenology of learning environments, from the methodologies of inclusive teaching (Ianes & Cramerotti, 2013) to evaluation skills. To support the complexity of current classes (D'Alonzo, 2017), from a participatory and inclusive teaching perspective, new educational spaces are needed, where Interior Design, Neurophenomenology, real tasks and co-working are inserted in a fertile and profitable for the well-being and training of the student (Gomez Paloma, Borrelli & Buondonno, 2019). Talking about schools means taking into consideration, also on the basis of the Guidelines of Law no. 107 of 2015, a redevelopment of spaces and the new Embodiment approach of Didactics and Pedagogy (Gomez Paloma, Calò, Borrelli & Tafuri, 2017). In this way, the organization of the spaces and the configuration of the environments become an integral part of the curriculum; it is necessary to make the neuroscientific principles of EC dialogue with the theoretical guidelines of architectural design (Weyland & Attia, 2015). The result will be the designation of 5 key principles: 1. space, 2. time, 3. report, 4. product, 5. process.

In our case, focusing on the first point, the importance of defining spatial shapes that provide for flexible ergonomics is highlighted; the goal is to make the action autonomous and independent (Merleau Ponty, 1945). Speaking of Outodoor Education (Monti, Farné, Crudeli, Agostini, Minelli & Ceciliani, 2017), in a complementary way to Indoor Education, means providing open and natural spaces, outdoor painting workshops, spaces for observing nature, dedicated areas to cultivation, to the care of greenery and the harvest, defining the transition from physical to relational space, from closed to open space (Gomez Paloma, Borrelli & Buondonno, 2019, p. 76).

The time represents a knowledge to be "shared and made responsible" and certainly not to be imposed (Gomez Paloma & Damiani, 2015). The result is the temporary choice of spaces and the chrome plating of the hands must be able to be customized on the basis of experience (Gomez Paloma, Borrelli, Buondonno, 2019).

The report involves listening and constant dialogue, and the presence of circular spaces promotes the fluidity of thought and of the body, through a modular organicity of the spaces, whose articulation is functional to the various cognitive actions.

The product, the result of collaboration and cooperation, as well as social sharing (Siegel, 2001) also takes place in presence, thanks to constant and responsible care of the territory. In this way, the product will evolve from standard to differentiated, from objective to subjective (Ianes, 2006).

The process provides for a circularity of the stimuli, with the activation of immersive paths in the situation. The spatial self-management of time and activities will allow the co-construction of active paths aimed at personal and planning autonomy (Gomez Paloma, Borrelli & Buondonno, 2019). The process will be so emotional and qualitative (Gomez Paloma, Calò, Borrelli & Tafuri, 2017).

The 5 principles, in close reciprocal relationship, allow to define a more organic school, where the subject is not limited to operating in a closed and defined environment, but rather is able to grasp that motivational energy that turns from the inside outwards. , in a socio-environmental context where indoor and outdoor spaces can enjoy a two-way and circular relationship (Gomez Paloma, Borrelli & Buondonno, 2019).

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