Giornale Italiano di Educazione alla Salute, Sport e Didattica Inclusiva / Italian Journal of Health Education, Sports and Inclusive Didactics - Anno 6 n. 2 - ISSN 2532-3296 ISBN 978-88-6022-450-7 - aprile - giugno 2022 - CC BY-NC-ND 3.0 IT- https://doi.org/10.32043/gsd.v6i2.661

THE CHALLENGE OF OUTDOOR EDUCATION FOR ONE NEW ALLIANCE BETWEEN SCHOOL AND FAMILY

LA SFIDA DELL'OUTDOOR EDUCATION PER UNA NUOVA ALLEANZA TRA SCUOLA E FAMIGLIA

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Abstract
The educational alliance between family and school increasingly passes through synergy and awareness of the importance of each primary training agency and the environment. Outdoor education represents a natural scenario that can be used to foster emotional emotional education and parental growth. The medical and pedagogical bases of this effective coaching originate in Epigenetics and Primary Prevention and the training of Professionals who will be able to apply this knowledge so ancient but so forgotten becomes so important.

L'allenza educativa fra famiglia e scuola sempre più passa attraverso sinergia e consapevolezza della importanza di ciascuna Agenzia di formazione primaria e dell'ambiente. L' outdoor education rappresenta uno scenario naturale da poter utilizzare per favorire educazione emozionale affettiva e crescita genitoriale. Le basi mediche e pedagogiche di tale affiancamento efficace hanno origine nella

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Epigenetica e nella Prevenzione primaria e diventa così importante la formazione dei Professionisti che potranno applicare queste conoscenze così antiche ma cosi dimenticate.

Keywords

Awe, family school alliance, outdoor education, inclusion.

Alleanza scuola famiglia, Awe (profonda meraviglia), outdoor education, inclusione

Introduction

During the lockdown, outdoor education proved to be a winning strategy to allow access to education for all in the best conditions of isolation from contagion and in compliance with the right to education. This article discusses the values of outdoor education in contact with nature, showing the achievable goals in terms of the integral development of the person. School and family have found themselves facing the problems of interrupting the usual path of teaching and learning and have had to forge a new alliance capable of allowing the review of the canons of the daily routine stiffened by the normalization of behavior according to the rules of the pandemic. The effect of experimenting with outdoor education was disruptive to the point of producing a change in the mental register on the part of teachers and parents. Adults have been able to read the change in educational models in the same achievements of childhood that have been able to tune well with a rediscovered nature as a source of emotional, cognitive and motor knowledge.

The outdoor practice exerts a constant "motivational emotional pressure"

involving in meta-communication (Non Verbal Communication) and enthusing each participant by imitation through the example of the Operator (and not passively or by compulsion by simply applying a "protocol") is at the basis of the possibility of stimulating the continuation of functional growth of the brain.

The most recent medical-pedagogical considerations in the epigenetic field and therefore concerning aspects of Neuro-Pedagogy and Bio-Education allow to concentrate one's awareness on the possibility of modulating the evolutionary development parable according to a Project that allows individual potentialities of expression phenotypic of being able to express itself to the maximum even if starting from a genetic basis considered fragile and of limited potential, obtaining results that were once hopeless where "DNA does not have the last word" (Feuerstein R., Rand Y., Rynders J.E., 1988).

1. Educate in contact with Nature

Our daily relationship with nature is often compromised by the mediation of everything that is not part of nature. The natural environment is actually an artificial environment in which we imagine we are in an open-air place in which to breathe pure air and in which to marvel at the colors of the sky and the forest. The mediation device is the printed paper, the book, the newspaper and the electronic medium from the mobile phone to the tablet. The child at school learns to distinguish the sea from the river, and the river from the lake, by reading the descriptions in the geography books and, in most cases, it is

impossible for the teacher to lead the class to see live what it deals with. We help ourselves with memory, with recalling experiences near and far, with the multiplication of images taken from postcards, paintings, photographs. Conversely, the contact with nature to which we draw attention is something else. Nothing artificial and imaginative. It is a real moment in which you touch, feel, smell, savor the environment, experiencing unique sensations and awakening your senses to the suggestion that comes from the outside. Nature teaches myriad things that we can only partially tell indirectly. But this is the challenge. Return to dialogue with that natural world that haste, electronic means, carelessness move away from us. The environment tells us who we are, how we are growing and urges us to new concentrations. We pass from silence, to admiration but also to the discovery of how to overcome unexpected risks. Geoffrey Bishop, founder in the USA of the Nature's Classroom Institute and Montessori School of Wisconsin (1996) offers natural environment education programs to schools and helps students to learn about the ecosystem through the exploration of outdoor places where children can live with peers, teachers, the community. Programs offered annually are offered to more than 4000 students in various locations such as the Midwest, Texas, California, Florida. The programs involve the participation of over 90 Montessori schools.

Since 2001 Geoffrey Bishop (2022) has created the academic curriculum of outdoor education in which the principles of the Nature's Classroom Institute are combined with the pedagogy of Maria Montessori. The purpose is to allow the child to stay in nature and become aware of what

this means from the point of view of invention, imagination, creation. During the short periods of immersion in nature, children, adolescents and teachers re-establish ties with the environment and a sense of harmony with the living world grows. They learn to take care of animals and live experiences in the woods together with the group with whom it is essential to create a constant interaction made of mutual help and deep sharing of experiences that unite for life. Feeling the wind and realizing how our walking is conditioned by it, or noticing how the wind directs the direction of the boat, or observing how the balance of the boat varies depending on the position of the crew, are just examples. to say that the child, the boy makes contact with nature in a different way. From the simplest to the most complicated occasions, there is always a discovery, there is always the search for a solution suitable for the stated purpose of feeling at ease in nature.

Giving the opportunity to connect to nature means preparing the child to love and respect his surroundings. For some children, the connection with nature is easy, for others it is difficult. When we take a class into the woods, we immediately notice if the pupils are able to enter the environment or if they remain detached from it. We did the experiment with 2-3-year-old children and we would have expected that in front of a beautiful green, clean and welcoming lawn they would have had the first reaction to run happily. For some it happened not for others. In most of the children the request for authorization and help from parents and teachers prevailed, indirectly asking for permission to run. The ethical sense of the impulse to throw himself into the adventure was stronger.

Another thing was the experience of the most enterprising children, they found themselves faced with the fears of adults who, with the usual prohibition recommendations, interrupted the access of the little ones to contact with nature. “Don't get dirty”, “don't run”, “don't get hurt”, “don't pick up the branch”. The sequence of "not" had to gradually be transformed into an attitude of openness to nature also on the part of adults. We observed how after a few hours of exercise in nature all the children became familiar with the natural environment and the adults themselves generated a new way of following the process of contact with the environment because they saw in children the happiness of being sitting on the ground, sliding along the slopes, being able to get dirty playing with friends. The experiment we are talking about concerns the training of teachers in the introduction of outdoor education since the nursery years (Chistolini, 2022). We have tried to create learning situations with all adults that are meaningful to children, from teachers, to parents, to grandparents, including school leaders. The project achieved the goal of making people understand through the adult's personal experience how important it was for the child to be able to immerse himself in nature so as to develop those skills that are already present in him and that only need to be able to express himself and manifest.

Children need to move. We have to accept it and allow it. Today we can see anyone anywhere in the world. We are far ahead from the point of view of human communication and yet we easily lose sight of communication with nature. It is necessary to give the child an

anthropological breath. Children brought into a natural environment feel connected to nature. Scientific studies on the topic deepen research in the broad field of biophilia, initially explored by E. O. Wilson (1984) and Kellert (1993), then taken up again in affective ecology and in the description of the regenerative functions of the natural environment (Berto, Pasini, Barbiero, 2012) for the purpose of increasing attention and concentration skills also in school performance. The Attention Restoration Theory (McMahan, E. A., Estes, D., 2015; Ohly, H. et alii, 2016) argues that a few minutes outdoors are enough to reactivate attention with evident benefit to the entire immune system. Children in contact with nature do not feel the nostalgia of computers, television and artificial games, they are instead attracted to what they can discover in the environment that alone can exert a powerful appeal and is a source of continuous inspiration. To the psychophysical benefits are added the pedagogical ones with the awakening of the often dormant interest in the monotony of the school classrooms enclosed between four walls.

2. Survive and breathe outdoors

Leading teachers and parents to think in terms of outdoor education requires intentional preparation for the purpose. It is not possible to assume that what attracts children is necessarily welcomed by significant adults in the educational process. The statement is also true in the opposite sense: it is not certain that what adults consider fundamental for children is unequivocally understood as relevant for children. Hence the need and the commitment to build a close alliance between school and

family for the good of children guided to re-establish proper contact with nature. The best educational practices show that it is good to start with adults by letting them experience their own living in the natural environment in a new way, even for a few hours. For this to happen in the best conditions, preparation for the task is required; that is, the knowledge of the educational process that is intended to be promoted so that each adult, in his / her part of competence, can actively contribute to the entire training process. The teacher who chooses to enter an outdoor education path experiments with the aim of pouring his experience into teaching and designing a curricular module in which geography, mathematics, drawing and all other disciplines become regenerated matter. in a living environmental context. It is possible to make the school a place of outdoor education by using outdoor spaces for play, for non-curricular education and for curricular learning (Gilchrist, Passy, Waite, Cook, 2016). At the same time, the parent who participates in an outdoor experimentation session has the opportunity to appreciate the benefits that children receive free to move and to measure themselves with what the environment presents to their senses and their reflections.

Our challenge is twofold: educate adults and open the school to education. In both cases, educating means looking beyond school to try to see where children come from. The universe of children is infinite and unlimited. Often the prejudices of adults distract children from their spontaneous search for the beauty of personal conquest of what the natural environment offers. Children are interested in everything. Their interest grows wherever they are, near a wood, near a river, near a

meadow. A few branches are enough to create a game and interaction situation and they discover that climbing on a trunk means measuring one's ability, they transform fear into adventure by themselves. They want to see how far their body takes them. They want to emancipate themselves. They love repetitions. You can go back to the same natural park and every time the group finds itself in a known place, it proposes new things. In these cases, repetition should not be avoided, on the contrary it allows us to go deeper and deeper. Adults think that you always have to change location in order not to help. While in the experiences described by the Nature's Classroom Institute it is shown how returning to known places constitutes a strong reason for interest. It is as if children make an appointment for themselves to complete an ongoing research. We can identify some characteristics of childhood that constitute a heritage that is sometimes mistakenly assumed by adults. In other words, children are deprived of the opportunity to escape as adults take upon themselves the burden of responsibility, depriving the little ones of the experience of surviving and breathing outdoors alone, within certain limits.

In children, the following prevail:

1. the spontaneity of interest and the consequent deep concentration on the task that they propose independently;
2. the desire for movement with a goal to be achieved;
3. the love for repetitions of actions they experience by inventing new things;
4. a preference for order, preferred to disorder and confusion;

5. the desire for freedom of choice, they want to build, they want to choose for themselves, they manifest a strong sense of freedom to discover, the unbridled race reveals the conquest of an unexpected freedom, they can run, they can stop, they can set their own times;
6. the presence of work in the game;
7. indifference to rewards and punishments;
8. the attraction for silence, they seek silence because they can think for themselves;
9. a sense of personal dignity and self-control;
10. personal self-discipline;
11. interest in the cosmos and in the interaction between things.

Reading these characteristics, we can immediately realize how they often become the domain of the adult concerned with protecting and taking away from the child everything that is seen as a risk. The fear of risk imprisons the child to the point of completely depriving him of healthy life experiences. For this reason, risk education is one of the most in-depth chapters in outdoor education. The question is to prevent damage and to lead children to known and safe places, previously explored by adults and such as to still constitute an environment in which the child can feel free to move, discover, build. In some practices (Harper, 2017) the perception of risk intervenes to the point of mitigating the outdoor experience, and it is true that risk awareness does not work as a deterrent to the educational model, but instead encourages a better structuring action. open spaces, guaranteeing paths in which the

danger can be balanced with age and measured with the help of expert personnel.

3. The academic child versus the scientist and poet child

Outdoor education is the experience of everything: nature, science, the arts, ethics. The child understands who he is and what he wants to be by refining the sense of discovery. It is not necessary to learn the names of the trees and the parts of the flower to appreciate their life among us. The sense of discovery is also the sense of research. The child who discovers himself while moving freely in open space, knows himself and becomes master of his own body. Then there is the sense of adventure. It is understood how the style of giving pre-packaged answers cannot be consistent with the ideas of discovery, research, adventure. Finally, the sense of the emotions that are so important in the construction of the personality. The academic child describes the standard profile of competences to be achieved according to homogeneous evaluation standards. Instead, the child artist and poet leads back to the educational ideal of Giuseppina Pizzigoni's school (1929) in which the experimental method guides the teacher to prepare learning opportunities starting from the concrete reality of everyday life.

The metaphor of the child scientist and poet was used by the pedagogist Giuseppe Lombardo Radice (1925) to describe how the child of the Rinnovata School lived deeply experiences in nature, experiences capable of modifying feelings and then becoming the object of a living narration. The child poet is also the child scientist who discovers the world through his intuition and initiative. Therefore, giving centers of

interest means offering natural objects to his contemplation, observation, curiosity. You must have the patience to wait for the experience to mature and have the attitude of a good gardener who helps the plants to bloom and the greater the care of them, the more beautiful the flower will be. Do not take away the opportunity of the experience from the child, and avoid the verbalism that leads to memorization without a soul. According to the pedagogy of the experimental method, the child has a wide range of action and is not a prisoner of the rules and a discipline that mortifies the spirit. The child is a poet in feelings and a scientist in discoveries.

The child needs self-control and interaction and in the outdoors these skills emerge spontaneously from outdoor activity. He stops in the face of danger and challenges himself to a new purpose. He reaches perfection even without being expressly requested because his feelings are educated to reach ends. Memorize, plan, organize the material making it functional to the construction he is doing. These are the skills required in the 21st century: explore, discover, tell your own experiences, develop creative stories. For all this, nature is a perfect environment. Allowing the space to inspire the child therefore means increasing the time spent outdoors to acquire, with experience in the field, those notions that the school needs to evaluate. During the outdoor school sessions no one gets bored and each one receives a particular suggestion to deepen the chosen research topic.After an hour's stay in the woods, in the park, in the outdoor place, all the children are busy and create from alone without needing constant reminders from teachers.

Adults stay behind. There are no artificial tools and this condition is essential for experimenting and inventing. They increase self-esteem and awareness of their abilities. Freedom combined with play leads children to build works of art with natural elements. Adults perform a function of providing adequate spaces and comfortable clothing. The process of self-regulation of one's contact with nature differs from adult to child. For the adult it is about deconstructing ways of thinking that have become daily routines, for the child it is about learning to govern their freedom.

4. Outdoors and ontogenetic awakening

The Batesonian Mind (Bateson G., 1972) understands what can be modified and sent back into a systemic relationship and its boundaries coincide with what can be reached on a sensory-perceptive level. The world of the child in the outdoor environment becomes infinitely large (Cosmos) even starting from the infinitely small (microorganisms and DNA). The regression to a primordial environment, where the imagination is stimulated and the exercise of afinalistic experimentation facilitated makes neuronal banks accessible and the epigenetic expression itself (Lipton, B. H., 2007) of phenotypic reading of the genomic heritage according to a real awakening of potential dormant by the obvious predictability and metropolitan safety. It would be like going back in time and allowing those children to learn how they would do when the transmission of transgenerational cultural contents transmitted

by the significant adult were the basis not only of their own survival but above all of that of the Species. The feeling of Nature has gradually become less and less intense in the human species since the process of elective cerebralization and the considerable technological increase have led to an ever greater sensory and instinctual delegation to systems of assisted delegation that reduce the stimulus of adaptive performances already from developmental age, with advantages involving a sedentary lifestyle, from the calculator to the navigator, to the neural networks, to the algorithms and the need to maintain awareness and control over A.I. (Artificial Intelligence). Sharing outdoor learning experiences allows an ontogenetic regression, awakening the joy of ritualistic participation (Eibl-Eibsfeldt I.,1984) as of complicity and exclusivity or even evoking anthropological preceptualities of an initiatic order such as admission rituals to groups of knowledge (adults, warriors, mothers , shamans, etc.) precious at any age but which in developmental age take on particular significance of identity and prosocial structuring.

5. Outdoor and Deep wonder (Awe)

When the human species for survival was attentive to natural phenomena and tried to understand and prevent them, with curiosity, dismay, amazement, wonder, learning methods were put in place that ensured depth of judgment and fertility of comparison with previously acquired data only by the individual but even by previous generations. These emotional-affective and cognitive-relational contents that can be evoked in the phenotypic expression of the character through the emotions

aroused by the environment and with the same genetic heritage of origin become infinite moments (even later in the reinterpretation of memory evocation and dream activity) that can be used as an experiential reservoir trans gene. In fact, the "Deep Wonder" or "Awe" (Chirico A., Gaggioli A., 2021) implemented outdoors can be a powerful catalyst for attention and for emotional and affective maturation. The attentional intensity deriving from the exalted sense-perceptive dimension acts on the State of Consciousness in a depth that recalls the Modification that takes place in the hypnotic trance through the activation of a monoideism (Granone F., 1989) in those involved and between adults significant and participating, a particular incisiveness is established in the passage of contents that become structuring. The processes of emotional and affective maturation are catalyzed and the example of behavior and relationship finds a harmonization with respect to an even greater notional collocation.

6. Outdoor and Neuronal Plasticity

In fact, the emotional drive activated in the outdoor (Emotional Environment) through the mechanisms of trans-acetylation and trans-methylation makes genes silenced over time and in previous generations transcribable because they are no longer necessary for survival in the metropolitan environment but which can now return, if evoked from environmental necessity, to be transcribed and expressed in phenotypic expression with the same genome of origin. The outdoor educational practice also through a prolonged global sense-perceptive immersion and

also a concomitant dynamic and coordinated motor solicitation (combined action of cerebellar and limbic-sensorial integration) as well as the establishment of the effective relationship between significant adult and individual in emotional maturation. affective-cognitive-relational exerts a thrust of synaptic and axonal neuronal growth by increasing the growth hormone (Somatotropin or STH, "Growth Hormone") at the pituitary level during the Rem phase of sleep to restore the physical activity performed.

Morphological and structural changes in the limbic system can be understood (Carter R., Seres P., Malykhin N. V., 2020) through the environmental interaction, concerning for example not only the dimensions of the Amygdala (which orients behaviors towards those of higher percentage of reinforcement) and of the hierarchies of expression on the behavior itself with less impact, for example, of the hippocampal activity on the instinctual expression dictated by the brain stem and by the more primitive structures inherited ontogenetically from the lower orders of the evolutionary scale. In short, the educational advantage through the outdoors of greater awareness and self-inspection skills at all ages. The action of this hormone does not only concern the trophism of muscles, joints and aponeuroses but also of nerve fibers and cortical, motor and sensory areas, responsible for their management, increasing the level of synaptic integration with greater transmission efficiency. of the inter-hemispheric structure of the corpus callosum and membrane exchanges related to the acceleration of axonal action potential. This action induces growth stimuli in the patrimony of neuronal arborizations

through synaptic increase and renewal, albeit post - pruning (or "spontaneous thinning" which takes place at the end of the first year of life, continues in senescence and is then greatly accelerated in the use of alcohol and substances and in involutional syndromes) of the quality of performance and in many cases of morphological-functional structural elements through the NGF or Nerve Grouth Factor (Levi Montalcini R., 1989). In terms of evolutionary genomics, each generation adds new experiences or makes usable in the new need for environmental adaptation genetic characteristics already present in the genome but temporarily silenced which through outdoor education are made phenotypically active and therefore effectively usable.

Conclusions

Outdoor interaction with significant figures as effective examples (Valor identity models) through the natural environment and movement is at the basis of the mirror integration processes through Mirror Neurons (Rizzolatti G., Sinigaglia C., 2006). The awareness of this advantageous educational modality both from the somato-psychic point of view and in any need for maturative evolution from both an educational and Psycho-Neuro-Endocrine-Immunology (PNEI) point of view becomes a goal training to be transmitted to those who will deal with emotional and affective maturation in childhood, adolescence and for parenting, including adoptive ones. Great advantage can be gained not only immediately in terms of emotional-cognitive and affective-relational performances globally in the integration and inclusive processes and in

the reduction of risk (Primary prevention) but also subsequently in the effective support of addictions of all kinds (Villanova M., 2006, 2012, 2020, 2021). In fact, these places of life require particular awareness and ethical and deontological training across medical-pedagogical-legal matters on the part of those who take on educational responsibility and the lack of these causes an increase in possible nuclei of evolutionary risk with repercussions on health (both physical and with increased risk of organic and mental diseases) first (becoming nuclei of evolutionary pathology) and then dissocial and criminogenic risk (substance consumption, various types of crime), both during critical periods such as pandemics and in the habitual regime.

Continuous and transversal training, monitoring and supervision of Professionals involved in the structuring of Primary Training Agencies (family, school, places of social, cultural and religious aggregation, Mass-media and Social Networks finally the same state as an emotional "climate" in comparison with other foreign countries, they provide the measure of the centrality of educational culture and pedagogical research as a unit of measurement for each perspective of application both in epigenetic and psycho-neuro-endocrine-immunological reading and in the political-social one of the global protection of Person in his freedom of growth and expression, in the advantage that adaptation to the environment, through biodiversity and otherness confers, in terms of evolutionary genomics, to each generation. Not favoring in this sense the learning of good practices of effective and early coaching as tools for the construction and structuring of useful life examples such as

Transmissible value identity models then becomes an emerging and quantifiable objective Responsibility.

References

Bateson G. (1972), Adelphi Editore Verso una ecologia della Mente. Milano

Berto, R., Pasini, M., Barbiero, G. (2012). Biofilia sperimentale. Il contatto con l'ambiente naturale aumenta al percezione del suo valore rigenerativo da parte dei bambini e migliora la loro capacità attentiva in Culture della sostenibilità, 5(2): 161-184.

Bishop, G. (2022). Where the Sidewalk Ends. In S. Chistolini (ed.). Outdoor education. Muoversi nello spazio mondo tra creatività, avventura, responsabilità (pp. 145-150). Milano: Franco Angeli.

Carter R., Seres P., Malykhin N. V. (2020). Effects of childhood adversity on the volumes of the amygdala subnuclei and hippocampal subfields in individuals with major depressive disorder in Journal of Psychiatry & Neuroscience.

Catarci M. (2015), Franco Angeli Ed. Percorsi di integrazione di migranti e rifugiati. In S. Nanni (Ed.), Educare oltre confine. Storie, narrazioni, intercultura (pp. 26-37). Milano.

Chamberlain, D. (1998), Bonomi. I bambini ricordano la nascita. I segreti della mente del tuo straordinario neonato. Pavia.

Chirico A., Gaggioli A. (2021), edito da San Paolo La Profonda Meraviglia Edizioni. Milano

Chistolini, S. (ed.) (2022). edito da Franco Angeli. Outdoor education. Muoversi nello spazio mondo tra creatività, avventura, responsabilità. Milano

Eibl-Eibsfeldt I. (1984). Die Biologie des menschlichen Verhaltens. Grundriss der Humanethologie. München: R. Piper & Co. (trad. it. Etologia umana. Le basi biologiche e culturali del comportamento, Bollati Boringhieri, Torino, 1993).

Feuerstein R., Rand Y., Rynders J.E. (1988) edito da Rizzoli. Don't accept me as I am: Helping "re- tarded" people to excel. Berlin: Springer (trad. it. Non accettarmi come sono, Rizzoli, Milano, 2011).

Fiorucci M. (2018). Società e scuola inclusive per lo sviluppo sostenibile: il con- tributo della Pedagogia interculturale. Pedagogia Oggi, 16(1), 115-127.

Gilchrist, M., Passy, R., Waite, S. & Cook, R. (2016). Exploring schools' use of natural spaces, in Freeman, C. & Tranter, P. (eds) Risk, Protection,

Provision and Policy, In T. Skelton (ed) Geographies of Children and Young People. Springer, Singapore, doi:10.1007/978-981-4585-99-6_18-1

Gilchrist, M., Passy, R., Waite, S. & Cook, R. (2016). Exploring schools' use of natural spaces, in Freeman, C. & Tranter, P. (eds) Risk, Protection, Provision and Policy, In T. Skelton (ed) Geographies of Children and Young People. Springer, Singapore, doi:10.1007/978-981-4585-99-6_18-1

Granone, F. (1989). edito da UTET. Trattato di ipnosi. Torino

Harper, N. J. (2017). Outdoor risky play and healthy child development in the shadow of the "risk society": A forest and nature school perspective. Child & Youth Services,

https://doi.org/10.1080/0145935X.2017.1412825

Levi Montalcini R. (1989) Theoria, "NGF: apertura di una nuova frontiera nella Neurobiologia" Rimini

Lipton, B. H. (2007), Ed. Macro Edizioni. La Biologia delle credenze come il pensiero influenza il DNA e ogni cellula. Cesena

Lombardo Radice, G. (1925). Edito da Arti Grafiche Stella Dove i bambini ci dicono che cosa sia "La Rinnovata", da "La scuola in Lombardia". Milano

McMahan, E. A., Estes, D. (2015). The effect of contact with natural environments on positive and negative affect: A meta-analysis, The Journal of Positive Psychology, 10:6: 507-519, DOI: 10.1080/17439760.2014.994224

Kellert, S.R. and Wilson, E.O. (eds.) (1993). The Biophilia Hypothesis. Washington, D.C.: Island Press.

Ohly, H., White, M. P., Wheeler, B. W., Bethel, A., Ukoumunne, O.C., Garside, V. N., Garside, R. (2016). Attention Restoration Theory: A systematic review of the attention restoration potential of exposure to natural environments. Journal of Toxicology and Environmental Health, Part B, 19 (7): 305-343, DOI: 10.1080/10937404.2016.1196155

Pizzigoni, G. (1929). L'insegnamento oggettivo. Rivista Pedagogica, 13 (3-4): 3-16.

Rizzolatti G., Sinigaglia C. (2006), edito da Raffaello Cortina. So quel che fai Il cerv specchio. Milano

M. (2021) Neuro-Pedagogia e bio-Educazione per la tutela emozionale ed affet infanzia, adolescenza e nella genitorialità, in "La responsabilità della Pedagogia nelle t sociali. Storia, linee di ricerca e prospettive" a cura di Polenghi S., Cereda F., Zini P. 2 Editore s.r.l. Milano.

Villanova, M. (2006), Edizioni Universitarie Romane. Introduzione alle scienze dell Formativo-forensi in Età evolutiva e nell'Adolescenza. Roma

Villanova, M. (2012), Ed. La Sapienza. Buone prassi e responsabilità professionale evolutiva. Roma

Villanova M. (2020), Edizioni Studium. Educazione all'affettività e genitoria

pedagogiche in Nuova Secondaria Ricerca, 180-191. 499. Roma
Villanova, M. (2021), editore La Sapienza. Affiancamento educativo alle Sostanze di u
Wilson, E.O. (1984), Harvard University Biophilia. Cambridge: MA PresS

Giornale Italiano di Educazione alla Salute, Sport e Didattica Inclusiva / Italian Journal of Health Education, Sports and Inclusive Didactics - Anno 6 n. 2 - ISSN 2532-3296 ISBN 978-88-6022-450-7 - aprile - giugno 2022 - CC BY-NC-ND 3.0 IT- https://doi.org/10.32043/gsd.v6i2.661