

Educating to corporeity in DaD: the formative and expressive potential of the body in movement

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Abstract

The present contribution aims to reflect on the fundamental importance of the promotion of corporeal education in educational contexts, in the light of adoption of distance teaching, due to the current and dramatic pandemic emergency. In rethinking and redesigning teaching, increasingly digitised, the fundamental question refers to the impossibility of thinking of a contemporary teaching that does not make use of technology and, at the same time, make use of a technology linked to the traditional principles of pedagogy and teaching.

Research was conducted on a sample of 78 children between the ages of 9 and 11, first through a bodily meaningful approach to promote the involvement of online students, resilience, motivation and then through the administration of the questionnaire Physical Activity Enjoyment Scale (Carraro, Young & Robazza, 2008), to confirm the role and importance of practice and pleasure in motor and sports activities. It is necessary to think of new models of teaching, mediated by technology and corporeity, which becomes a playful educational medium that allows education, logical and analytical thought to be able to best deploy its potential (MIUR, 2018).

Keywords: PACES-it; online teaching; corporeity

Introduction

To meet the changing needs of today's socio-cultural context, the school is called to respond more and more in accordance with the different needs of the individual within a community that interacts and evolves with it. Teachers and educators are increasingly invested in roles and tasks which require them to undergo continuous training, which encourage the acquisition of disciplinary, methodological-didactic and psychopedagogical skills, and which, on the one hand, give the teacher a higher level of professionalism and on the other hand, give him/her increasing responsibilities. The so-called 'distance teaching' has suddenly become the absolute protagonist of the school scene (Buckingham, 2013; Celentano & Colazzo, 2008).

The inclusion in schools of different order and degree of devices and new operating methodologies related to them was a very slow process, gradual, uneven and discontinuous, with alternating and incomplete results. The sudden acceleration linked to the compulsory closure of schools and the emergency to maintain, 'in some way', the didactic continuity has provoked a race to the experimentation of the available educational platforms, with an increasingly intensive use of portable devices and social media, to compensate for the drastic interruption of all social and relational aggregations, weaving the threads of a new collective existence remotely.

The unexpected barrier of the Covid-19 pandemic anticipated the real process of using digital technologies that had already been discussed at the Paris Conference in 2018, where the importance of a new teaching was introduced that, with digital means, facilitates interconnection, dialogue and gives a boost to the spread of environmental sustainability (Rome Conference, 2020; The Digital Education Action Plan, 2021–2027; Agenda 2030 Sustainable Development).

¹ The authors shared the idea of the contribution. Lucia Pallonetto wrote the sections '*Bodies in the digital age: the PACES-it questionnaire*' and '*The formative and expressive potential of the body in action*'. Carmen Palumbo is the scientific coordinator of the project. She wrote the sections '*Introduction*' and '*Conclusions*'.

The studies of the Embodiment Theory invite to orient themselves towards an *embodied education* (Tarozzi & Francesconi, 2013, pp. 11–17), a field of research that promotes *all those educational experiences in which the subjects are allowed to exercise themselves to become aware of their lived experience* starting from their own corporality. It includes the mind–body–emotions triad, among which the body has a priority role as a vector of learning in real contexts.

The *mind* is also rooted in the *body* and evolves in relation to tangible situations, which are linked to the experience to which it is connected in a continuous simulation activity (Shubert & Semin, 2009; Zwaan, 2009). Knowledge is, therefore, based on experience. Corporeity and movement express the being and the becoming of the subject through actions, emotions and cognitions in the continuous relationship of self with the world.

Prassic, logical, conceptual and symbolic functions originate from the motor act, which determine a cultural development open to the different human practices: music, dance, mime, professional arts, sport. Experiential learning, derived from the theories of '*learning by doing*', determines a didactic framework that enhances corporeality and movement.

As stated by Alain Berthoz and Jean-luc Petit (2008, p. 20), '*there is no perception that does not refer to the body that acts (...), there is a co-emergence of action and knowledge*' and the body becomes a means and mediator of knowledge. The body, in other words, roots man in the world: '*my body is the center of the world... I am aware of the world through my body*' (Merleau-Ponty, 1945, p. 97). '*My body is more than my body. I do not have a body, I am a body*', said Emmanuel Mounier (1905–1950) and it is from this statement that the need to educate from the body is manifested for the professionals of education (Palumbo, 2018).

The person is, therefore, an incarnate subject and relationships materialise through the body in multiple modes and forms of expression. The person is the expression of the endiad 'I and body' (Moliterni, 2009c, pp. 13-5): it is and becomes through the body and beyond the body, in the encounter with the other and with reality; the 'corporeality' is the full expression of the person's becoming-to-be through movement, understood in its versatility, it produces actions, cognitions, relationships, feelings, self-consciousness and metacognitions in relation to the world.

This contribution reflects on the importance of promoting corporality education in educational contexts, in the light of adoption of distance learning. Corporeity should be considered as a value, not to be reduced to mere physicality, but, on the contrary, a starting point for knowing, communicating and acting in the environment. We can define the first formative starting point, the discovery of the body in movement, as the protagonist of the self-expression and communication of the individual towards other individuals, the means by which each builds together with the others a system, in which all together relate to the environment. Bodily experiences become communicative and expressive actions of the subject, then make him more aware of his own possibilities and manifest it to others. The instrument that the child uses to know himself and the world around him is his body. Children move and play with their bodies, jump, run, communicate through body mimics and, in doing so, they learn, acquire autonomy and security and achieve a well-being and a psycho-physical harmony. The school, in all this, supports the child, helping him to develop the ability to interpret the messages coming from his own body and that of others; to develop the ability to communicate through the body, an infinite source of potential. The goal is to perceive oneself and be perceived by others through the dance movement, even if they are closed and still within their own space (the laboratory). Art, in all its facets, is for children an opportunity to look at the world that surrounds them with different eyes. Children express thoughts and emotions with imagination and creativity: art stimulates their propensity to positively infect other learnings.

1. Bodies in the digital age: the PACES-it questionnaire

The recursiveness between nature and culture in the contemporary world opens up new perspectives and generates possible contradictions in the relationship between the environment and man. In relation to this complexity, which originates from the very act of man and from an informal society (Floridi, 2017), technology assumes a dual role. On the one hand, it is internal to the man–machine–environment, simplifying their interaction and enhancing the processes of perception of the world; on the other hand, it requires a wealth of knowledge and skills to man in order to select information with cognition and critically understand the phenomena.

This process also involves the school institution and, more generally, the educational world and all the actors who make it up, who find themselves faced with a great challenge: designing, testing and evaluating the possibility of developing training and learning paths mediated by the development and acquisition of new methodological tools and equipment, capable of responding to and managing the changes that cultural and scientific progress requires.

In the last period, the development of digital, meeting the pedagogical world, has taken on an educational value, constituting a specific field of research aimed at studying the implementation of innovative teaching methodologies, improving conditions that encourage learning processes (Lancia & Rubinacci, 2007, pp. 163–170).

As also highlighted in the recent National Digital School Plan, the aim is to build the conditions for a learning process oriented to cultural innovation and the rational exploitation of digital technologies, which become '*enabling instrument, connector and change flywheel*' (MIUR, 2015). All this is certainly true, but no learning process can ignore a more modern body enhancement.

Virtual communication involves a rethinking of educational design and poses the theme of technological 'remediation' (Bolter & Grusin, 2000) of the body placed in digital environments. Paradoxically, it lacks due to the pandemic has caused a real explosion of studies concerning corporeity, in particular in the neuroscientific field, which has highlighted strong links between brain activity, mental activity and bodily activity.

2. Materials and Methods

Numerous studies have documented that the fundamental element is the constant practice of motor activity, which is a necessary condition for the promotion and protection of health, physical and psychological, in all stages of life (Chou et al., 2012; Strong et al., 2005; Wanner et al., 2012; WHO, 2004).

An essential reason why practicing motor activity is good is the so-called '*fun and enjoyment*': this principle leads the subject to constantly engage and immerse himself with 'passion' in motor activity, while the absence of pleasure or fun leads to a partial involvement and, in many cases, to the removal itself (Garn & Cothran, 2006; O'Reilly et al., 2001).

Practicing motor activities, experiencing motor play and the expressive movement of the body, in particular, leads the child to sensations of great psychophysical-wellbeing, and mainly in younger children, the body movement generates rewards that have no equal in any other activity (Carraro, 2012). It is precisely between the ages of 9 and 11 that children are preparing to grow up, begin to build their own identity and gradually acquire the skills necessary for their knowledge to be consolidated during their growth. If properly solicited, they become aware of the enormous expressive potential of their body and they could be managed to develop an analytical and critical thinking with a proper dose of originality and imagination.

Therefore, the main idea of the research was to propose to children, at a distance, a path of body experience and at the end of the same, the administration of the questionnaire PACES-it. This has allowed us to demonstrate that the child is able to switch from an analogue mode of thought to an inductive type, to reach the same point of arrival starting from different ways.

Therefore, the methodology for conducting the research was adopted first through a bodily meaningful approach and then through the administration of the questionnaire quali-quantitative PACES-it.

2.1 Goal

The aim of this administration was to identify and detect, through the questionnaire, the level of individual satisfaction with motor activity. The children were involved in a small activity of movement – which had the task of bringing them closer to the knowledge of the body – and refinement of sensory skills, perceptive, expressive, kinetic-spatial rhythmic, involving them through the playful experience of creative movement setting.

2.2 Sample

The subjects observed in the research were identified in a sample of convenience (n = 78; no. m = 34; no. f = 44) between 9 and 11 years of age in a primary school in the province of Salerno.

2.3 Tools

The questionnaire used in the administration was translated and validated in 2008 to the Italian version (PACES-It) (Carraro, Young, & Robazza, 2008). The version used for this research consists of 16 items with data scores on a Likert scale of 5 points, from 1 (they are in complete disagreement) to 5 (I completely agree) divided into nine 'positive' questions and seven 'negative' questions.

Results and discussion

The data were screened in advance to determine the accuracy of the data input. Cases with missing or out-of-range values have been deleted. The collected data have been categorised into a descriptive statistic (PSPP software). Analysis of variance (ANOVA) has been performed, the results of which do not show any gender differences (Table 1). The *p* value by gender of ANOVA, on the other hand, does not show any significant value (*p* value always >0.05) between male and female.

Table 1. Descriptive Statistics (Software PSPP)

Item	Gender	n	Mean	Std. deviation	Std. error
I'm having fun	F	44	4.61	0.49	0.07
	M	34	4.62	0.65	0.11
	Tot	78	4.62	0.56	0.06
I'm bored	F	44	1.43	0.76	0.11
	M	34	1.44	0.61	0.11
	Tot.	78	1.44	0.69	0.08

Item	Gender	n	Mean	Std. deviation	Std. error
I don't like	F	44	1.41	0.66	0.10
	M	34	1.38	0.49	0.08
	Tot.	78	1.40	0.59	0.07
I find it pleasant	F	44	4.66	0.53	0.08
	M	34	4.50	0.51	0.09
	Tot.	78	4.59	0.52	0.06
I don't enjoy it at all	F	44	1.36	0.69	0.10
	M	34	1.32	0.47	0.08
	Tot.	78	1.35	0.60	0.07
It doesn't give me energy	F	44	4.48	0.59	0.09
	M	34	4.50	0.62	0.11
	Tot.	78	4.49	0.60	0.07
It makes me feel sad	F	44	1.34	0.68	0.10
	M	34	1.38	0.65	0.11
	Tot.	78	1.36	0.66	0.08
It is very pleasant	F	44	4.55	0.55	0.08
	M	34	4.59	0.50	0.09
	Tot.	78	4.56	0.52	0.06
My body feels good	F	44	4.59	0.54	0.08
	M	34	4.47	0.61	0.11
	Tot.	78	4.54	0.57	0.07
I get something out of it	F	44	4.41	0.66	0.10
	M	34	4.21	0.77	0.13
	Tot.	78	4.32	0.71	0.08
It's very exciting	F	44	4.23	0.71	0.11
	M	34	4.26	0.62	0.11
	Tot.	78	4.24	0.67	0.08
Leaves me unsatisfied	F	44	1.50	0.70	0.11
	M	34	1.41	0.56	0.10
	Tot.	78	1.46	0.64	0.07
It's not interesting at all	F	44	1.36	0.57	0.09
	M	34	1.44	0.79	0.13
	Tot.	78	1.40	0.67	0.08
It gives me a strong feeling of success	F	44	4.34	0.71	0.11
	M	34	4.21	0.69	0.12
	Tot.	78	4.28	0.70	0.08
It makes me feel good	F	44	4.52	0.55	0.08
	M	34	4.44	0.50	0.09
	Tot.	78	4.49	0.53	0.06
I feel like I prefer to do something else	F	44	1.55	0.76	0.11
	M	34	1.56	0.86	0.15
	Tot.	78	1.55	0.80	0.09

Analysis of the questionnaire data showed positive results. High or medium-high scores were counted for entries related to questions about pleasure and emotional–motivational involvement.

In other words, it has been calculated that the degree of enjoyment (enjoyment of physical activity) of each child reaches a total score that can vary from 16 to 80, overturning the scores of negative items and adding them to positive items.

Moreover, for the same calculation, an ANOVA has been carried out, indicating the number of subjects, the Mean, the standard deviation, the values minimum and maximum (Table 2).

In conclusion, it is also possible to confirm through this analysis that there is no gender difference in liking and that this is high in both genders.

Table 2. Descriptive Statistics (Software PSPP)

	Gender	N	Mean	Std. Deviation	St. Error	Minimum	Maximum
Tot. score	F	44	72.34	7.28	1.10	48.00	80.00
	M	34	71.79	6.85	1.18	57.00	80.00
	Tot.	78	72.10	7.06	0.80	48.00	80.00

Three questions were also added to the questionnaire specifically: 'How well do you know the discipline of creative movement?', 'Do you think it is (boring; funny)?', 'Would you like to participate in a school project of creative movement?'

We can, therefore, say that practice represents the possibility of experiencing the body as a living body and a mediator of existence, inserted in a space-time suitable for experiencing possibilities, through the communicative processes proper to the expressive relationship. The feedback allows us to affirm how these experiences assume a central importance in the life process involving the physical, psychic, emotional and socio-relational dimensions of personality. The living body represents the place where it is possible to educate to life: for this reason, it is necessary to refer to a perspective capable of declining the movement as an incarnate relationship between subjects in communication with each other and the world.

The reduced sample is the main limit of research. Future studies may be directed to increase the size of the sample and involve pupils from a wider age group, with a different social background and with different levels of education. These results and the methods used could be useful for teachers to develop a motor education programme that not only includes physical ability, but also serves to increase the fun during their lesson session.

The idea is to underline that the child needs movement; therefore, it is also necessary to increase at a distance the laboratory practice or assign motor tasks to be performed in an *outdoor* environment.

The theoretical framework outlined in these few lines highlights the centrality of corporeity and the complexity of the phenomenon of movement in the educational sphere, which, however, thanks to its devices of simplicity, opens new horizons of educational research and models of teaching practices.

3. The formative and expressive potential of the body in action

One of the cognitive forms proposed by Howard Gardner is *dance-educational* because it is moved by a type of bodily intelligence-kinesthetic, has the ability to act as a motor to support other intellectual forms and has the ability to promote in an original way the access of the person to knowledge. The dance-educational proposes its own methods of research and uses the body as an expressive medium suitable to form a harmonious motor development in accordance with the expressive and emotional. In fact, the dance materialises the physical world hidden in each of us and brings out the deepest dimensions of human nature that, through other activities, would not be able to rise to the surface.

Starting with the concept of creativity, it seems appropriate to stress that *'the creative act, in its proper sense, is when we are able to activate, to light in ourselves, our deepest uniqueness, that is, that nucleus of originality in which, or through which, we are able to produce meaning. (...) Creativity is synonymous with life at the highest level. If life has a meaning it has in our uniqueness. Celebrating the uniqueness in us, we celebrate life. Creativity is the act par excellence in which our uniqueness is expressed'* (Scaramuzzo, 2002, p. 220). In each of us, there exists from birth a creative potential peculiar to each one and that makes us unique: dance, as a creative act, emphasises the difference between individuals in the sense of distinction between the uniqueness of each being. *'Thanks to its communicative and expressive qualities, it allows everyone to be more aware of their own person and the surrounding world, in a unique and personal way. It allows us to celebrate diversity and improves our ability to understand the individuals, groups, communities in which we live, strengthening our sense of belonging'* (Gough, 2010, pp. 19–20).

The second pedagogical principle that dance brings is the importance of experience in learning. This concept has been absolutely legitimised within the pedagogical thought, thanks to John Dewey, who argued in his studies that without direct experience, there can be no learning and, therefore, the student plays an active role in the teaching–learning process.

'The school must provide genuine opportunities in which personal participation shows the importance of the material and the problems it conveys. From the point of view of the student the experiences that result from it have a value in themselves; from the point of view of the teacher they make it possible to build that basis that is required to understand the notions that are transmitted by signs, and to arouse attitudes of understanding and interest regarding the material transmitted symbolically' (Dewey, 1916, pp. 258–259).

The body plays once again the central role: *'the child needs to experience and discover, starting from his own body in continuous evolution'* (Chemello, 2011, p. 16). The dance, teaching to be masters and conscious of the body, sanctifies the indissoluble union of the self with the body. In this way, dance is proposed as a discipline able to face the process of growth; it is listening, it is relationship, it is authenticity of the gesture for which you become what you are, in order to transform in the evolutionary process of growth the ego from master to guest.

The body movement facilitates the process of assimilation necessary for learning, whether it is directed to a certain scholastic notion or to the outside world, reality, the other. It has been seen how, by encouraging and not inhibiting the natural ability to operate a *mimesis*, through the body and dance, it is possible to leave the student free to express himself and to find his own way, to have, in fact, an experience of himself and of the world, because he is deeply involved in his own interiority.

Even Isadora Duncan stated, *'Many deep secrets of the outer and inner meanings of nature and its forces can be transmitted to the child through dance. One of the first to understand it was Jean-Jacques Rousseau, who in his book Emilio or the education of the child went so far, to even argue that a child should not learn to read and write until he is twelve years old, until this age all knowledge should be acquired through music and dance. (...) I have often had the example of teaching the students the meaning of a poem, a simple poem that I thought every child could understand and learn by heart. But when I asked something about the meaning of the verses, the answer was a confusion of words from which it*

was impossible to make any real sense. Then I took the same poem and taught the children to dance it, to translate it into a gestural and emotional version of movement, and I was then pleased to see their faces illuminated with intelligence and understood that through the movement they had really understood of this poetry, what had succeeded incomprehensible in the form of words' (Duncan, 1980, pp. 39–40).

As Martine Menès reveals, 'children, in order to make their own the information they are taught, need to feel and establish a link between what they must learn and what constitutes or will constitute their lives' (Menès, 2013, p. 140).

This leads to the third pedagogical principle used in dance: the importance of the dimension of pleasure. There can be no learning if there is no desire to learn, 'the intellectual appetite derives from the drives, thanks to the mechanism of displacement and sublimation that directs them towards cultural and social purposes instead of the initial vital purposes: devouring books, in the first place, then devouring food, for example' (Menès, 2013, p. 57). In other words, it is the educator who must stimulate the curiosity of the child in the discovery of himself and his surroundings. When we dedicate ourselves to something that arouses our interest, we are more focused and energetic physically and psychically.

With regard to the fourth and last of the pedagogical principles analysed here, its implication in every other foundation already taken into consideration is clear. In fact, both in the concept of creativity, in that of experience lived through the body, and in the dimension of pleasure, there is an implicit call to be present, to be in the here and now, to perceive oneself as immersed in something that is totally satisfying and ends in itself. What matters is not the final product, the externalisation of an ephemeral appearance, but the emotional experience of the individual while he is immersed in this flow of movement that confirms him to be able to make himself similar to the other by himself and to involve himself inwardly.

Conclusions

'Learning is, therefore, a transformation of activity that is produced as a result of the practice... you always potentially learn something every time you act' (Durand-Poizat, 2017, p. 38).

Children, the mainstay of the school system, need to explore and know the world, understand the phenomena that characterise it through direct experience and the use of the artefacts at their disposal, doing a job of analysis with respect to their functioning and feeding their 'know-how' and acting. The school, in this direction, can develop new approaches to learning, overcoming the mere dispensation of information and becoming the place where the same are selected, managed and critically evaluated for the construction of knowledge.

It is a question of developing skills that belong to *Information Literacy* and that children need to mature by actively working in the construction of their own sense networks that connect, transversally, all formal disciplines and contexts with informal ones. Among the eight key competences indicated in the recent recommendations of the European Council (Council of the European Union, 2018) for lifelong learning, the digital one recalls the role of technologies, which offer ample opportunities for improving the educational task.

The interaction itself with technological apparatuses presupposes reflective, participatory and shared attitudes that offer the opportunity to make even the relationship of teaching–learning more effective. In this sense, it is necessary to rethink and promote new awareness in the role of the teacher who goes beyond the traditional dispensation of knowledge and is expressed in driving practices and stimulation, in active, social and participatory paths, as well outlined within the National Indications (MIUR, 2012). The bill n. 1635 was presented in the Senate with the aim of introducing the hour of emotional education into schools. The intention is to introduce teaching of the new discipline from the school year 2020–2021.

Art. 1 of the draft law provides for this purpose that the training process related to emotional education is oriented to:

- foster and optimise the conscious knowledge and control of oneself and one's own emotions in developmental age and childhood;
- develop emotional intelligence as an ability to recognise one's own emotions in relation to those around us, managing them and learning to interact constructively with others and
- prevent risky social behaviour, detrimental to the dignity of the person, in the private, ethical, religious, racial and with particular reference to gender equality.

To achieve this, the body must be immersed in the didactic space as the ideal place to form the personality of the learners and for defining their character, but also the body as the main device through which experiences are realised, you develop learning and you produce knowledge (Rivoltella, 2012).

Body resources, in fact, offer science *the synthesising potential of experience*. Starting from the assumption that our thoughts, the development of our higher and even more abstract cognitive functions are based on the body in place, the research aims to highlight the educational potential of bodily experiences, recognising them a sensitive educational value for the ability to build meaningful and effective associative mechanisms able to 'drag' mnemonically information indispensable to learning processes.

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