

PHYSICAL TRAINING AND SCHOOL LEARNING: STRATEGIES AND METHODS OF INCLUSIVE TEACHING

ATTIVITA' MOTORIA E APPRENDIMENTO SCOLASTICO: STRATEGIE E METODI DI INCLUSIONE DIDATTICA

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Abstract

Carrying out inclusive practices, with specific strategies and personalised pathways, a crucial role must be recognised in physical education which is a pathway to promote strategies and inclusive methods, to involve young people with their different potential in the growing up and cognitive maturation process.

Physical education is involved in the inclusive process, and it is seen as a strategy to improve teaching and promote learning. Considering the evidence in the literature, we concluded that physical education could be a valid tool and offer a decisive contribution to the learning process in its various steps. Therefore, this work aims to highlight how physical activity can carry out multiple inclusive strategies to improve learning and answer the multiple educational needs of young people.

Nell'attuare pratiche inclusive, con specifiche strategie e percorsi personalizzati, bisogna riconoscere un ruolo di fondamentale importanza alla disciplina dell'educazione fisica quale mezzo di promozione di strategie e metodi di inclusione, al fine di coinvolgere a pieno tutti i giovani con le loro differenti potenzialità nel processo di crescita e maturazione cognitiva.

L'educazione fisica è coinvolta nel processo di inclusione ed è vista come una strategia per migliorare la didattica e favorire l'apprendimento. Considerando le evidenze disponibili in letteratura, abbiamo concluso che l'educazione fisica potrebbe essere un valido strumento e offrire un contributo decisivo al processo di apprendimento nelle sue varie tappe. Pertanto, scopo di questo lavoro è quello di evidenziare come attraverso l'attività motoria si possano attuare molteplici strategie di inclusione con il fine di migliorare l'apprendimento e di rispondere ai molteplici bisogni educativi dei più giovani.

Key-words: inclusiveness, physical education, school, didactic.

Parole chiave: inclusività, educazione fisica, scuola, didattica.

Introduction

School is one of the main places to measure the ability of a community to create an environment that welcomes differences. Inclusion is not a passive adaptation of the student to a defined model, but it is a process in which we relate to others, exchange ideas, and learn new knowledge, thus becoming a moment of individual and collective growth (Goussot, 2015).

An inclusive school is, then, a school in which everyone's differences and identities are respected, whose main goal is to bring out students' abilities, guide them towards academic success, placing in highlight the individual at every educational action, taking into account

singularity and complexity of the subject, his/her identity, aspirations and weaknesses, in the various stages of development and training (D.M. n. 254/12).

Therefore, inclusiveness does not only require pupils with disabilities but all subjects who are recognised specific training needs: the aim must be to create a non-marginalising school, where the well-being of the students is the primary condition, which derives from didactic strategies and educational methods that allows sharing of knowledge and full accessibility, in which prevail social justice and educational equity (Nussbaum, 2007).

The current guidelines in the pedagogical and didactic field affirm the dignity of diversity, enhancing it as a resource for the entire class, allowing each one to become an inclusive class through the potential enhancement. The disabled classmate becomes an active subject, who can share his/her disability with others.

An inclusive school is a school that thinks and plans by keeping everyone in mind, starting from the modification of the context and not acting only on the subject, but finding specific strategies, adapted to the disability, and useful to the community. Starting from this idea, school physical education is the best space where the self is tested starting from what a person can give or do (Gianfragna, 2005). It is the vehicle by which students can create their identity, develop their autonomy, improve cognitive processes and strengthen interpersonal and social relationships (Bandura, 2000).

Motor activity is an important tool for integration and inclusion that leads to respecting diversity because the need of moving is also fundamental for people with disabilities as it expresses their physical, emotional, mental and social potential, it is expressed by the dimension where the subject is tuned with him/herself, family, community and the world (Ghedini, 2017). Motor and sports activities represent a privileged meeting point for diversities which are included without distinction using everybody's abilities (WHO, 2015). Within the school context, it must be ensured that children with disabilities have equal access as other children in participating in gymnastics, games and recreational activities (UN, 2006).

The educational nature of motor and sports activity makes clear the need for it to be conducted in ways that respect the diversity of individuals, both to allow the widest participation and in respect of the peculiarities and specific educational needs of each. If confined in educational terms and not orientated towards the achievement of results at any cost, through the body and movement it is possible to promote the expression of the person in a pleasant and welcoming context, supporting the individual in the acquisition of personal autonomy and contribute to the development of self-awareness and self-esteem (Colella, 2011). Person-centred physical activity can promote inclusive processes and individual cohesion in society, both for able and disabled individuals, as it allows everyone to explore profound traits of self-interaction with particularities and difficulties of the other and to undertake further significant experiences, such as, for example, interpersonal communication, cooperation, respect for rules, solidarity, correctness, justice, the motivation increase, the encounter with frustration and its overcoming.

1. Physical activity in the field of inclusive education

The educational value of physical training, in terms of contribution to the formation and development of the person, has been strongly supported by the European Council which has repeatedly stressed in its documents the need to associate motor activity with education programs (Farinella, Mosso & Leonardi, 2016).

It is precisely this educational nature of motor and sporting activity that makes it necessary for it to be conducted respecting the diversity that exists between individuals, to allow the widest participation in respect of everyone's peculiarities and specific

educational needs, as it constitutes an important opportunity of growth for each individual, regardless of their personal and social conditions, above all it helps social inclusion (Moliterni, 2013).

316.000 students with disabilities attended Italian schools (+5% compared to the previous school year) in the 2021-2022 school year, a result of the greater attention paid to diagnosing and certifying disability conditions among young people, the increase in demand for assistance from families and the growing sensitivity of the ordinary education system towards the issue of scholastic inclusion (ISTAT, 2022). This demonstrates how much physical activity, particularly in the school environment, plays an important role in welcoming diversity and including disabled children, without negative effects on children without disabilities with positive outcomes in both cases (Di Palma & Ascione, 2017); hence, motor and sports practice allows everyone to express themselves, fulfilling their potential and valuing themselves to install trust in all people, in whatever condition they are, encouraging themselves to get involved (Milani, 2020).

Living, working and sitting next to each other does not always correspond to the activation of inclusive learning environments which helps to learn together, by sharing goals and work strategies (Ferrucci, 2004), this is why Physical and Sports Education has an essential value in school curriculum: it represents the most favourable environment to explore and test with experiences related to corporeity and motor actions and it allows all students to get involved at the same time.

Creating an inclusive teaching class with gymnastics means calibrating the exercises in relation to the observed data and potential of the disabled person, through strategies such as restructuring and breaking down complex tasks into simpler ones, in order for all learning groups to participate in the teaching-learning process.

However, effective inclusion is still developing in many European countries for students with disabilities during school gymnasium classes. Some data from the CIP monitoring (2012/13) shows about 30% of Italian students with Special Educational Needs do not participate in physical training and sports lessons, highlighting how physical and sports activity is not yet recognised as functional for socialisation, physical knowledge and body experiences, especially for subjects with Special Educational Needs (SEN), whatever they are disabled or not. This non-participation in motor activities, unfortunately, underlines that even today, in educational institutions, sport is not considered useful to students' cognitive development (Gomez Paoloma & Ianes, 2014). Probably this is due to the difficulties of teachers in not feeling worried at the idea of including disabled students in the physical education class, not knowing how to include and motivate the whole group or, again, avoiding teaching aspects in favour of educational strategies orientated to inclusion. Also, it has been affirmed and discussed in the literature that length of service and age affects teachers' inclusive attitudes: younger teachers with fewer years of service have more inclusive attitude than older colleagues (Cornoldi et al., 1998), despite showing more difficulties managing disabled students (Nichols, Sosnowsky, 2002).

The meeting point of all teachers could be transversal skills, which lead them to focus on identifying students' personal attitudes rather than the critical point of acquisition of disciplinary knowledge: particularly physical and sports education offers to the student the opportunity to communicate his/her own human being through the body, becoming also an expression of educational, training and learning processes.

2. How physical activity promotes learning

Physical and sport activity assumes an indisputable educational value for both able and disabled people; for the disabled, above all, movement allows them to demonstrate both their physical/sporting and cognitive abilities, with benefits to psychological level (greater awareness of own abilities, self-esteem, better acquisition of personal autonomy) and on a cognitive level (better concentration, attention, memory) with also positive effects on school learning. The motor/sports approach allows you to use your body as a learning tool because, thanks to it, you can acquire knowledge and skills that otherwise would be inaccessible (Sgambelluri, 2011).

Some studies have shown that constant practice of physical and sporting activity produces beneficial effects on learning, developing cortical areas and functions, memory, and attention, favouring neurogenesis and academic performance (Kraus, 1961; Eriksson, Perfilieva, Björk-Eriksson et al, 1998; Scudder, Lambourne, Drolle, Herrmann, Washburn, Donnelly et al, 2014; Larson & Cody, 2020). In a meta-analysis carried out on 44 studies, it is highlighted that physical activity is positively associated with better cognitive abilities in children, in particular between the ages of 11 and 13 (Sibley & Etnier, 2003).

Numerous scientific evidence documents the benefits of physical activity on learning and, more generally, on cognitive abilities (Brisswalter Collardeau & René, 2002; Tomporowski, 2003; Donnelly et al, 2011), in individuals with disabilities. They have shown that in situations in which the cognitive deficit is medium-severe, there is a strong solicitation of the mirror neurones in the mechanism of emulation of gestures, these neurones are able to facilitate unknown motor tasks learning (Buccino et al., 2004). At the same time, dyslexics and dysgraphic who present difficulties decoding phonemes and graphic symbols, often show problems from the motor point of view with impairment of basic skills such as space-time organisation, lateralisation, and eye-hand coordination. Even attention disorders can be improved by physical and sports activity as it favours the mechanisms related to memory, attention and logical processes (Benso, 2011).

An experimental study conducted on children with specific learning disabilities (DSA) has shown that significant improvements in cognitive abilities can be achieved through constant and continuous training: stimulating key functions of lateralisation, global and eye-hand coordination, spatio-temporal orientation, not only the neural interconnections of the motor areas (area 4 and 6) are influenced but also all the others connected to them thanks to the associative stations of the brain that regulate the exchange of information and their interpretation (Lodi, Seghi, Barbieri & Lovecchio, 2018). The Australian Department of Health and Aging suggests that children with Down syndrome should get at least 60 minutes of moderate to high-intensity physical activity a day. Hence, recent studies have shown that 58% of children with disabilities do not follow the WHO recommendations on the minimum levels of recommended daily physical activity, while this percentage is around 15-25% in the case of typically developing children (Barr & Shields, 2011). These differences could be related to a lack of accessible play-motor programs, reduced physical abilities (poor motor coordination, cardiac abnormalities, hypotonia), lack of interest, frustration and poor cooperation from family members of children with down syndrome.

Physical activity adapted to disabled persons, therefore, remains the way to show and use their residual abilities, in a world that always reminds them of what they are unable to be and what they do not have.

3. Inclusive physical activity: teaching strategies and methods

Every form of educational intervention starts from the ability to remove obstacles, focusing on functional skills and hypothesising suitable educational proposals. In order for physical activity teaching to be truly effective and inclusive, it is first of all necessary to observe and evaluate carefully the sensory-perceptive characteristics, the acquired and emerging skills and the main difficulties of students in order to be able to organise and implement motor activity education pathways in inclusive contexts (Bortoli, 2004). It is important to provide the student with visual examples and clear behaviour models also through images, photographs or videos, structuring the space, the time in a clear and flexible way, but the fundamental action, key inclusiveness, is to involve classmates through didactic mediation strategies, tutoring and cooperative learning.

Different solution strategies can be pursued for an effective inclusive physical education lesson (Smith & Nigel, 2006):

1. Homogenisation, creating groups and teams with comparable motor skills (e.g. zone game);
2. Roles and tasks attribution, assigned according to individual motor skills and abilities;
3. Compensation, the partner participates using auxiliary aids, arranging the corrective tools or the individual adaptation of rules at the performance (e.g. raffleball);
4. Use of diversity as a central aspect of physical activity and games; consciously playing with differences, the attractiveness of the movements are strengthened using their own strength (e.g. it counts the ability to hit the shuttlecock in the badminton game, limited mobility/ wheelchair);
5. Integration of fortuitous elements to make differences fade into the background (e.g. a basket or a goal is worth as much as the points scored by rolling the dice).

The fundamental step in creating inclusion with physical activity is the removal of architectural barriers. For example, regarding the space, it is necessary to ensure access in all the areas of the place where the activity takes place, inserting visual suggestions and spatial reference points. It is fundamental to facilitate the sensory aspect through the reduction of distracting elements (presence of only the material to use), or by reducing the disturbing noise. Besides, the vision can be facilitated by practising activities on a plain collared floor and by adapting the lights, using lighter, softer, larger, more colourful balls or sound balls, or using velcro guides/gloves. Other strategies to facilitate inclusion and prevent the subject from feeling different or inferior to others are lowering the basket or enlarging its diameter (Sordani, 2016).

Educational action must be orientated towards encouraging and supporting students, on one hand, formative assessment processes such as continuous reflection of representations and practices of inclusive action and, on the other, educational activities aimed to promote cultural practices capable of co-building “inclusive cultures” in the classroom context (Patera, 2022). From this point of view, inclusion has the objective of instilling all those values of acceptance and inclusion supporting the knowing development of how to act for life (Sgamburelli, 2011).

The main inclusive teaching strategies that promote respect for diversity and inclusion, useful to guaranteeing awareness and responsible learning are:

1. Cooperative learning, studying together in small groups, pupils retain concepts better by interacting and developing qualities such as responsibility, positive interdependence and social skills;
2. Tutoring, which means asking some pupils to become tutors for others. It is one

of the supportive methodologies that can foster new social contacts and interactive learning. However, it is also useful for students who play the tutor role, memorising the concepts and taking greater responsibilities and education diversity;

3. Problem-solving, finding solutions through already acquired knowledge, provokes the interest of pupils and increases their self-esteem and confidence in their own abilities;
4. The case study, consists of a detailed description of a real problem that students have to identify and position, approaching with effective ways;
5. Laboratory teaching, the practical reproduction of a previously learned theoretical concept, which allows students to produce something by using strategies already known or learned at that moment;
6. Lipped classroom, a strategy that provides multimedia materials on a topic so students can consult at home being already prepared on the day on that topic;
7. Debate, an extremely effective methodology to develop linguistic, logical and behavioural skills useful for being part of active citizenship;
8. Role-playing, students can play actors' roles for a limited period of time in front of an audience. This method helps to better understand social dynamics and opinions different from one's own;
9. Reality homework, inclusive teaching strategy aimed at solving a problem-situation similar to real life, which offers the opportunity to examine a problem from different theoretical and practical perspectives, preparing pupils for social interactions outside school, and in addition it offers the opportunity to collaborate by reflecting on one's own behaviour;
10. Use of new technologies, such as educational robotics or software, facilitates learning, helping students to approach technical-scientific skills in an interactive way and bridge the digital divide.

In the extracurricular context, a series of initiatives and good practices are spreading into the Italian national territory. "All inclusive sport - coaching inclusivity" is the largest network initiative in the Reggio Emilia province aiming to include minors with disabilities in local sports clubs. The project allows disabled children to play sports with their "able-bodied" mates in inclusive sports clubs and associations in their area, with trained tutors' support (when necessary). In the 2018/19 school year, All Inclusive Sport included 50 children and young people with disabilities in 47 sports clubs/associations in the province of Reggio. Games without barriers have been a fixed appointment for nine editions, a Paralympic Sports event organised every year by "Art4sport Association ONLUS", in collaboration with Coni (Latino, 2022).

These are just some of the projects aimed at creating moments in which everyone's differences meet and exchange even beyond the educational dimension of school, an expression of a substantial revolution that is slowly affecting our society, confirming that teaching methodology of inclusion has the goal of ingraining in the youngest all values of inclusion, acceptance of self and of the other and sharing, the way to progress towards an increasingly inclusive society.

Conclusions

It is possible to learn and communicate through the body and movement. Every teacher has to observe kids and read the messages that their bodies send through the

movement, direct and free expression of each human being. The various activities that can be carried out during Physical Education class amplify the relational and communicative aspects of acting (taking on roles, enhancing moments of aggregation and collaboration, etc.), creating situations full of predictable and unpredictable aspects that cannot and must not escape. Starting from the assumption that each student needs, indifferently, appropriate educational proposals, the teacher has to create the conditions of acceptance and collaboration such as to allow adequate participation in the activity.

Therefore, we must not be intimidated by what is different, we must not think that we do not have the tools to reduce differences, on the contrary, we must focus on the similarities and the advantages of being different, designing strategies to enhance these differences. We should focus on students' motor skills and use movement to improve them. Physical Education must no longer be understood only as an education of the body movement, but as an education of the subject through movement, in order to also intervene as a facilitator of schools learning in subjects with special educational needs.

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