MOTOR LEARNING AND EMOTIONAL ENGAGEMENT OF STUDENTS WITH SPECIAL EDUCATIONAL NEEDS THROUGH UNIVERSAL DESIGN FOR LEARNING

APPRENDIMENTO MOTORIO E COINVOLGIMENTO EMOTIVO DI STUDENTI CON BISOGNI EDUCATIVI SPECIALI ATTRAVERSO L'UNIVERSAL DESIGN FOR LEARNING

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Double Blind Peer Review

Citazione
Belfiore, P., & Saraiello, E. (2024). Motor learning and emotional engagement of students with special educational needs through universal design for learning. *Italian Journal of Health Education, Sports and Inclusive Didactics*, 8(2), Edizioni Universitarie Romane.

Doi:
https://doi.org/10.32043/gsd.v8i2.1087

gsdjournal.it
ISSN: 2532-3296
ISBN 978-88-7730-493-3

ABSTRACT

The inclusive approach to training and education is fundamental to respond to the individual and diversified needs of students. Universal Design for Learning (UDL) is an approach that recognizes and values students' differences, promoting different teaching methods to meet everyone's needs, starting with the role played by emotions. The aim of this work is to analyses the role of motor and sports education based on a bio-psycho-social paradigm as an essential tool to ensure an inclusive educational environment.

L'approccio inclusivo alla formazione e all'istruzione è fondamentale per rispondere alle esigenze individuali e diversificate degli studenti. L'Universal Design for Learning UDL è un approccio che riconosce e valorizza le differenze degli studenti, promuovendo diverse modalità didattiche per soddisfare le esigenze di ognuno, a partire dal ruolo svolto dalle emozioni. L'obiettivo di questo lavoro è quello di analizzare il ruolo dell'educazione motoria e sportiva sulla base di un paradigma bio-psico-sociale come strumento essenziale per garantire un ambiente educativo inclusivo.

KEYWORDS
Motor Learning; Emotions; UDL
Apprendimento motorio, emozioni, UDL

Received 28/04/2024
Accepted 12/06/2024
Published 24/06/2024

Introduction

Disabilities and Special Educational Needs (SEN) require special attention when it comes to physical activity. It is important to adopt an inclusive approach that allows all children and students to participate fully and meaningfully in physical activity, regardless of their abilities. Every individual with a disability or SEN has different needs. It is important to adapt physical activity according to the abilities and needs of each participant. This could involve changes in the exercises, the equipment used, or the rules of the game. It is crucial that teachers and coaches receive adequate training on inclusion and strategies for working with people with disabilities or SEN. This training should include disability basics, physical activity adaptations, and techniques to ensure a welcoming and inclusive environment (Coates, 2020). Make sure that the environment in which the motor activities take place is accessible to everyone. This could mean providing suitable facilities and equipment, as well as eliminating architectural barriers. Furthermore, it is necessary to promote a climate of respect and acceptance, in which each participant feels welcome and valued. Inclusion is not only about physical participation, but also about the opportunity to make friends (Gaspari, 2014). Personalized goals should be set for each individual, taking into account their abilities, interests, and desires. This can help keep motivation high and ensure significant progress. Students' progress should be regularly assessed and activities adapted accordingly (Canevaro et al., 2021). This helps to identify any challenges and find appropriate solutions. In summary, physical activity for people with disabilities or SEN requires a holistic approach, which takes into account individual needs and promotes an inclusive and welcoming environment. When students feel supported and included, they can experience the physical, emotional, and social benefits of physical activity.

1. Physical Education, inclusion and school

Inclusion processes determine the identification and removal of barriers and the empowerment of facilitators in order to enable the presence, participation and success of all people (Ghedin, 2009). Therefore, in an inclusive school all pupils, including those with Special Educational Needs (SEN), are supported in their maximum personal expression, thanks to learning environments accessible to each student. In this perspective, the value of Physical Education and sports at school is particularly important, so much so that in several ministerial documents (MIUR; 2012; 2015; 2020) it is noted that this discipline contributes to promoting self-knowledge and one's potential in the constant relationship with the environment

and with others, and that school sport has "the task of [...] contribute to increasing the civic sense of students, improving aggregation, integration and socialization" and therefore "the school must be the interpreter of a new school sports project that favors the inclusion of the weakest and most disadvantaged groups among young people" (Goodyear, 2012). Several authors have highlighted the ability of Physical Education and sport to affect the physical, psychological and social well-being of participants (Opstoel et al., 2020; Masala et al., 2016; Colella, 2018; Colella et al., 2020; Di Palma & Ascione, 2017; Tafuri et al., 2017)), fostering inclusion processes. In this context, it becomes essential to consider the importance of teaching styles in promoting motor learning from an inclusive perspective. The styles, characterized by direct teaching and structured practice, can foster awareness and the application of specific skills (Casolo & Melica, 2005; Colella, 2018; Casolo, 2011). Conversely, learning styles based on indirect teaching and guided discovery can promote creativity and experimentation on the part of students. The choice and variation of teaching styles are related to students' learning processes, favoring the development of cognitive, coordinative and social skills. According to Colella, there is no universal teaching style that is suitable for all students, but it is necessary to adapt the educational methodology tailored to the specific needs of each group of students. The conscious choice of appropriate teaching styles, by the teacher, can foster effective and inclusive learning (Benetton & Visentin, 2021; Valentini et al., 2019). All of this encourages students to develop their skills and competencies in an authentic and engaging way. In this sense, Physical Education and Sports can play a strategic role in the school curriculum for inclusive purposes because it represents an opportunity to educate to fair play and respect. Furthermore, it promotes a personal awareness about the achievement of collective goals (UNESCO, 2015). From a pedagogical point of view, the Physical Education teacher must assume a professional posture adhering to inclusive principles (Ceciliani, 2018), valuing the diversity of their pupils, teaching them appropriate interactions, reinforcing the positive ones already present and implementing peer tutoring (Hersman & Hodge, 2017). In this sense, the role of the physical education teacher as a facilitator of the inclusion processes of pupils with Special Educational Needs is considered (Spencer-Cavaliere & Watkinson, 2010; Coates, 2020; Coates & Vickerman, 2013; Haegele & Sutherland, 2015). In particular, the teacher must possess ad hoc skills in creating inclusive environments for all, investing in collaborative and equitable activities. The didactic proposal that best responds to these objectives is the one that is inspired by the principles of

Universal Design For Learning (UDL), (CAST, 2011), where the teacher favors processes of cohesion of the individual in the community (Moliterni, 2013). The Inclusive Physical Education teacher plays a crucial role in teaching, as they are able to adapt forms of learning so that they are accessible to all students, regardless of their abilities or abilities. Using playful and reflective approaches, the teacher fosters creativity and collaboration among students, encouraging them to solve problems and acting as a facilitator (Di Nardo, 2014; Cairney, 2019). The use of Physical Education as an innovative teaching tool for the inclusive training of learners makes it possible to enhance and renew teaching practices, focusing on student involvement and interaction. It is essential that the teacher is adequately trained and able to involve all students in the learning process, reflecting critically on their teaching practice (Gomez et al., 2014, 2015). In this way, the inclusive approach of Physical Education not only promotes the inclusion of all students, but also stimulates reflection and critical reasoning on learning, making the knowledge acquired expendable in daily life (Magnanini, 2021). Thanks to an inclusive approach, Physical Education and, consequently, the teacher of this discipline, become a powerful tool and subject to promote the cognitive, affective and social development of students.

2. Universal Design for Learning

Universal Design for Learning (UDL) is an educational framework aimed at providing all students with equal opportunities to learn. It advocates for creating flexible learning environments and curriculum that can accommodate diverse learning styles, preferences, and abilities (Figure 1). The three main principles of UDL are:

- **Multiple means of representation**: This principle suggests offering content in various formats to cater to diverse learning styles. For instance, providing text-based materials along with audio and visual aids can help students with different preferences and abilities comprehend the material better.
- **Multiple means of action and expression**: This principle encourages allowing students to demonstrate their understanding in various ways. Some students may excel at written assignments, while others may prefer to express themselves through presentations or artistic creations. Providing multiple options for assessments ensures that every student can showcase their knowledge and skills effectively.
- **Multiple means of engagement**: UDL emphasizes providing multiple pathways for engaging students in learning. This can involve offering

choices in topics or activities, incorporating real-world relevance into lessons, and fostering a supportive learning environment that values students' interests and backgrounds.

By implementing UDL principles, educators strive to remove barriers to learning and create inclusive classrooms where every student can thrive (Meyer et al., 2014; Mufanò, 2020). It's about recognizing and embracing the diversity of learners and designing instruction that meets their individual needs.

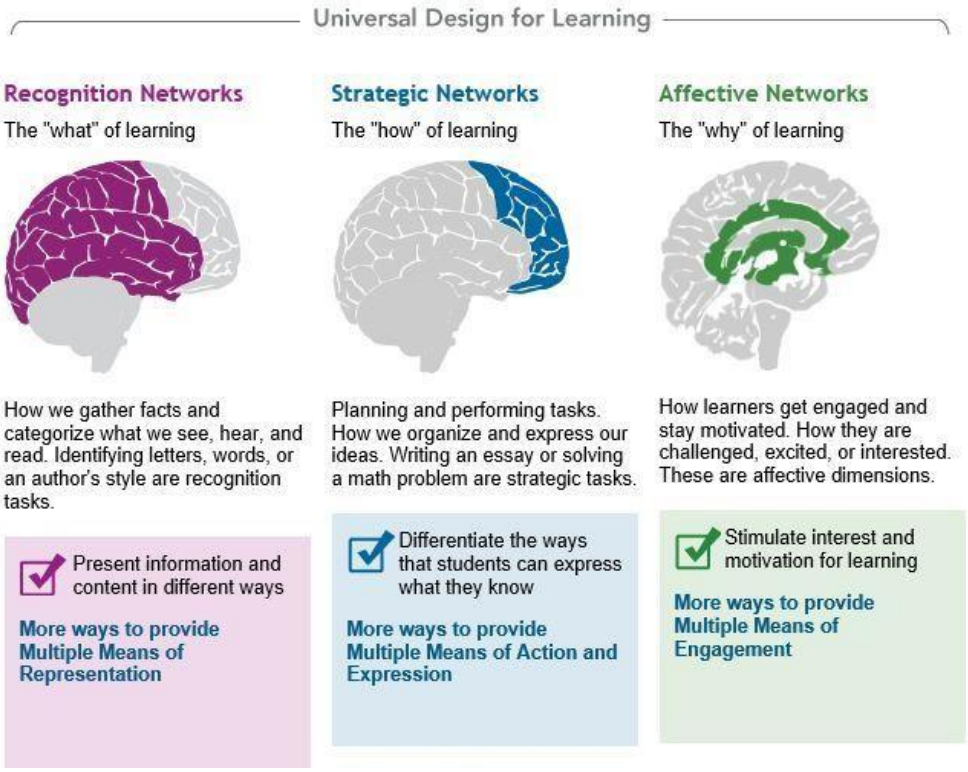

Fig. 1 - Three Learning Networks (CAST)

Universal Design for Learning (UDL) encourages teachers to look at and work from a different perspective, taking into account the limitations of the learning environment while valuing diversity. Most of the scientific evidence shows that proposing the formation and creation of learning environments according to UDL principles can produce a significant improvement in the collaborative attitude of teachers and in general in the teaching and learning processes in favor of all pupils, including pupils with special educational needs (Schelly et al., 2011). In particular,

the UDL Guidelines, declined in a sports environment, can help Physical Education teachers to develop practice plans and *coaching* methods that support the learning needs of a wide spectrum of students. In this context, it becomes essential that educational institutions and teachers actively engage in the implementation of inclusive and universally designed teaching strategies, which take into account individual diversity and promote the learning of all students, regardless of their personal circumstances. Universal Design for Learning promotes the use of effective and sustainable teaching methodologies, which enhance individual diversity and foster the development of global skills through a holistic and multidisciplinary approach (Savia, 2018). In this way, an inclusive education can be ensured for all students, allowing them to grow and develop as unique and original individuals. The teacher of inclusive Physical Education must create authentic teaching contexts through the UDL, must meet the needs of each student by proposing real game situations and teaching methodologies suitable for everyone and personalized according to the needs of each one, such as problem solving and guided discovery (Cottini, 2019). In this way, all students are motivated to experiment, independently discover their own abilities, their own and limitations, and create bonds with others. Physical Education thus becomes a powerful tool to foster inclusion, collaboration, and personal development of all students. A fertile ground where to plant the seeds of inclusive teaching, capable of generating a context of learning and knowledge transfer for all.

3. Motor learning and emotional aspects

Today there are many relationships between emotions and learning (Bortoli & Robazza, 2016). Emotions have been an object of interest for scientists and thinkers of all times and philosophers first and psychologists have questioned themselves on its precise meaning, showing a plurality of approaches and points of view. Emotional competence and self-awareness in education and training can have a positive influence on students' learning processes. For a long time this aspect was not fully understood and emotions were banished from the educational-didactic activity in the school context; In some cases they were even perceived as an obstacle, effectively ignoring a complete vision of the student who learns with all of himself, who goes through the teaching-learning process without limiting himself only to rational, measurable aspects linked to the individual disciplines of study (Lipoma, 2014).

In recent years, new scenarios have opened up within the investigation of the relationship between emotions and learning, starting with neuroscience. We speak of "neuropedagogy", "neuroeducation" or "neurodidactics", to designate the birth of a new field of interdisciplinary research and intervention (Sibilio, 2015).
According to neurodidactics scholar Geake, there are at least four areas of research and intervention. The first area concerns the study of learning and its factors: this field of investigation includes research on attention and memory disorders, on the incidence of stress and the emotional component in learning processes. The second area concerns the learning environment: the context seems to have a considerable influence on cognitive activity (from the impact of noise, ventilation, lighting to the relational context, both school and extracurricular). The third area is related to the curriculum and focuses more on issues related to the learning of individual disciplines and other purely didactic issues. Finally, the fourth area concerns issues related to school organization: how to organize the timetable, classes, level groups, etc., for effective learning. It is precisely the most recent studies and research in the neuroscientific field that have led to the awareness that there is an extremely deep relationship between cognitive and emotional processes. Human action, as well as the practice of sport, makes it possible to satisfy, through intelligent behaviors of adaptation to everyday life situations, some intrinsic human needs (Ceciliani, 2018). In the specific case of sporting activity, they are connected to the experience of play, movement, competition and group life, aspects that are fully satisfied precisely in sport. Subjects who carry out regular physical activity, whether group or individual, show greater confidence in their own abilities, greater self-esteem, ease in social relationships and better tolerance of stress, so it is possible to say that it will be difficult for disorders such as anxiety and depression to manifest themselves in these people (Di Palma et al, 2017). The educational microsystem envisages a massive use of all the actors involved in the concept of inclusion (teachers, parents, students), in order to promote this principle in the school context (Colella, 2018). Exercise science plays a role of fundamental importance for pupils with special educational needs (Qi, J., & Ha, 2012), as it allows a social, affective and relational growth of pupils with SEN and of all others, avoiding generating negative repercussions in the peer group (Schelly, et al., 2011). Therefore, sport must be used as a link between pupils with SEN and the rest of the peers in order to increase socialisation, promoting effective inclusion for all learners (Tafuri et al, 2017).

An environment can be defined as inclusive when everyone knows each other's strengths and weaknesses and, together, tries to overcome difficulties (Masala et al., 2016). For this to happen, the help of school and sport is necessary, two educational contexts par excellence in which the "able-disabled" relationship is more inclusive. The relationship between school and sport is initially out of balance, in fact, unlike what happens in the world of sport, the process of inclusion has been active in schools for many years (Limone, 2021). In addition, public education is a fundamental element in enhancing the importance of physical activity and sport, as it is in this context that people with SEN can enhance their potential by achieving unimaginable results. Sport plays a fundamental role in the lives of all people through the multiple bodily experiences, through games and playful activities, people can become aware of their bodies, their abilities and abilities and, over time, learn to manage them.

Conclusions

The increase in the number of pupils with Special Educational Needs, in particular attending lower and upper secondary schools, has led to a greater training commitment on the part of teachers, who are called upon to know, interpret and adapt the theoretical parameters set at the programmatic level, often taking on the responsibility of being pioneers in the field experimentation of an extremely structured theoretical model. These introductory reflections explain, in a nutshell, the motivational input at the origin of the choice to create this work, "BES & inclusive motor activities". The analysis of the methodological-didactic processes of the school within a more complex social system, characterized by the issues *of inclusion* and *special educational needs,* is of fundamental importance for the definition of an education for all pupils. In such a context, there is a tendency to orient educational processes towards an inclusive perspective based on the concepts of Universal Design for Learning. It states that everyone must be encouraged to follow their own path of complexity and sharing, to use their talents and strengths, to cultivate activities that foster optimal experiences. The teaching of Physical Education lends itself well to this mission because it represents the most favorable environment for experimenting experiences attributable to corporeality and motor action and then allows the bio-psycho-social perspective of the student to be manifested.

Therefore, the role of the Physical Education teacher as a promoter of inclusion processes characterized by ad hoc teaching styles becomes fundamental.

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