TEACHING ACTIONS BASED ON PHYSICAL LITERACY TO STIMULATE THE INCLUSIVE, PSYCO-PHYSICAL AND SOCIAL EDUCATION OF STUDENTS IN PRIMARY SCHOOL

AZIONI DIDATTICHE NELLA SCUOLA PRIMARIA BASATE SULL'ALFABETIZZAZIONE MOTORIA PER STIMOLARE LA FORMAZIONE INCLUSIVA, PSICO-FISICA E SOCIALE DEGLI STUDENTI

Giovanna Scala
Università degli Studi della Campania "Luigi Vanvitelli"
giovanna.scala@unicampania.it

Maria Giovanna Tafuri
Università Telematica Pegaso
mariagiovanna.tafuri@unipegaso.it

Federica Badii Esposito
Università degli Studi di Napoli "Parthenope"
federica.badiiesposito@uniparthenope.it

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ABSTRACT
Physical literacy is a crucial element in children's development, supporting their ability to understand and acquire basic motor skills that contribute to overall growth. This experimental study evaluates the effectiveness of a structured teaching intervention on physical literacy for primary school students with Special Educational Needs (SEN). Through the use of the Strengths and Difficulties Questionnaire for mental well-being, the Children's Self-Efficacy Scale (CSES) for self-efficacy and the TGMD-3 and BOT-2 tests for gross-motor and fine-motor skills, the project measures the results obtained quantitatively and qualitatively. The collected data will be compared with current literature, helping to outline the benefits of an inclusive approach

L'alfabetizzazione motoria è un elemento cruciale nello sviluppo dei bambini, supportando la loro capacità di comprendere e acquisire abilità motorie di base che contribuiscono alla crescita complessiva. Questo studio sperimentale valuta l'efficacia di un intervento didattico strutturato sull'alfabetizzazione motoria per alunni della scuola primaria con Bisogni Educativi Speciali (BES). Attraverso l'utilizzo del Strengths and Difficulties Questionnaire per il benessere psicologico, della Children's Self-Efficacy Scale (CSES) per l'autoefficacia e dei test TGMD-3 e BOT-2 per le abilità grosso-motorie e fine-motorie, il progetto misura i risultati ottenuti in modo quantitativo e qualitativo. I dati raccolti saranno confrontati con la letteratura attuale, contribuendo a delineare i benefici di un approccio inclusivo.

KEYWORDS
Motor literacy, Self-efficacy, Mental well-being, Motor skills, Special Educational Needs (SEN)
Alfabetizzazione Motoria, Autoefficacia, Benessere Psicologico, Abilita Motorie, Bisogni Educativi Speciali (BES)

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Introduction

Physical literacy is a fundamental competence for children, as it is the basis for the acquisition of essential motor skills that can be applied in everyday life contexts such as play, sports activities and social interactions. Numerous studies confirm that robust physical literacy is closely linked to higher levels of physical activity, psychological well-being and cognitive development, improving children's body awareness, coordination and self-efficacy (Gallahue & Donnelly, 2003; Logan et al., 2015). In particular, Clark and Metcalfe (2002) highlight that acquiring motor skills early contributes to an active lifestyle, promoting long-term physical and mental health. Similarly, Kirk and Rhodes (2011) indicate that an effective physical literacy programme can increase perceptions of motor competence in children, encouraging them to participate more actively in physical activities. Recent studies, such as those by Button et al. (2020) and Gibb et al. (2021), further emphasise the positive impact of motor activity. It not only promotes a variety of basic motor skills and supports cognitive growth through interaction with the environment, but also fosters the development of executive skills and self-regulation ability, important foundations for social involvement and psychological well-being. This study uses a multi-dimensional assessment - including psychological well-being, self-efficacy and motor skills - to better understand the overall impact of physical literacy on students with Special Educational Needs (SEN), offering a more comprehensive perspective on the psychological, social and physical benefits of the intervention programme.

However, including students with Special Educational Needs (SEN) in physical literacy projects presents specific challenges that require adaptations in activities and customised educational strategies aimed at respecting each child's learning modalities. Goodway and Branta (2003) note that motor interventions designed specifically for children with learning difficulties and disabilities can have a significant impact in the development of their motor skills, provided they are implemented with a highly personalised approach. Haywood and Getchell (2009) also suggest that such programmes must incorporate social components to facilitate inclusion, particularly in the school setting.

In Italy, inclusion is a cardinal principle of primary education, supported by legislation that aims to guarantee equal learning opportunities for all students, including those with SEN (Cottini, 2004). However, studies on physical literacy applied to children with SEN remain limited, partly due to the complexity of the adaptations required. This study aims to explore the impact of a targeted and customised educational intervention for the physical literacy of students with SEN.

1. Goals and Methodology

The main goal of this study is to evaluate the effectiveness of an educational intervention on physical literacy for children with SEN, using a mixed research approach combining quantitative and qualitative data. The 12-week intervention comprised two weekly sessions of 60 minutes each, during which motor activities adapted to each child's needs and abilities were proposed. The mixed method approach made it possible to explore changes in test scores and to observe qualitative aspects such as children's motivation, participation and confidence during the activities.

The quantitative survey involved the learner dimension and made use of the TGMD-3 and BOT-2 tests, the Strengths and Difficulties Questionnaire, and the Children's Self-Efficacy Scale (CSES) for an in-depth and comprehensive assessment of progress in the motor and social domains, thus contributing to optimising inclusive practices in schools.

The qualitative analysis, which focused on the teacher dimension, followed a systematic observation process, based on specific items that made it possible to monitor the impact of the teaching intervention on group dynamics, social inclusion and the emotional well-being of students with Special Educational Needs (SEN). The teachers observed the children through a structured grid containing indicators such as active participation in activities, collaboration with peers, level of emotional involvement, motivation, frequency and quality of social interactions, and ability to respect rules during group games. These items were selected to provide a clear picture of the social and relational skills of children with SEN within motor activities and to measure the change in their self-esteem and self-confidence over time. At the end of the 12-week intervention, the teachers involved also completed a semi-structured questionnaire to collect further data and personal evaluations on the observed changes. The questionnaire included open and closed questions designed to allow teachers to express their views on the effectiveness of the activities in terms of social inclusion and the improvement of children's psychological well-being. The closed questions allowed indicators, such as perceptions of inclusion and social skills, to be quantified with a rating scale, while the open questions allowed teachers to describe specific episodes or qualitative evidence that could better illustrate the progress or challenges encountered by the children. At the same time, some

teachers were involved in short structured interviews, in which it was possible to elaborate on aspects observed in the group dynamics and individual behaviour of the SEN children. During the interviews, the teachers had the opportunity to discuss in detail the children's level of participation in the activities, the strategies used to foster inclusion and any modifications to the activities to meet specific needs. These interviews provided a direct and personalised perspective on how the physical literacy programme contributed to improving the well-being and sense of belonging of children with SEN, enriching the qualitative analysis and confirming the positive impact of the programme on both the motor skills and the social and emotional development of the students.

2. Participants

The study sample consisted of 30 primary school students, aged between 8 and 10 years. Of these, 10 were identified as having Special Educational Needs (SEN) and presenting specific educational needs requiring a customised teaching approach. The participants' SEN include:

1. Specific Learning Disorders (SLD), including dyslexia, dyscalculia and dysorthographia, which affect the ability to read, write and calculate, leading to the need for support in cognitive processes and information management.

2. Attention-deficit/hyperactivity disorder (ADHD), characterised by difficulties in attention, impulsivity control and motor regulation, requiring a learning environment that facilitates concentration and management of activities in a structured manner.

3. Emotional regulation difficulties, which include issues related to the management of emotions and behavioural reactions, affecting social interactions and participation in school activities.

4. Language disorders, with difficulties in language expression and comprehension, which may limit verbal communication and require intervention to facilitate communication and integration into group activities.

5. Mild motor problems, including difficulties in coordination, balance and fine motor skills, affecting the performance of activities requiring precision and motor control.

The participants were divided into two groups: an experimental group and a control group, each consisting of 15 children (5 with SEN and 10 without SEN in each group).

Participants had to meet specific selection criteria to be included in the educational intervention:

1. Age between 8 and 10 years old.

2. Attending primary school and having never participated in similar physical literacy programmes.

3. Having Special Educational Needs, for students with a SEN diagnosis, or being normo-typical students but without any particular advanced motor experience.

4. Being potentially able to carry out the proposed teaching activities.

The experimental group participated in the physical literacy-specific teaching intervention, based on activities adapted to meet the needs and abilities of each child. Students with SEN in this group received individual support, while their peers without SEN were incentivised to collaborate and offer support during the activities, creating an inclusive and motivating learning environment.

The control group, on the other hand, continued to participate in normal school PE activities without any specific physical literacy interventions.

3. Educational Intervention

The physical literacy intervention was designed to foster the development of basic motor skills and improve the social inclusion of students with Special Educational Needs (SEN) through specific, structured and adapted motor activities. During the 12-week intervention, students participated in two weekly 60-minute sessions, in which activities were organised in progressive modules that included both individual exercises and group games, allowing them to work on gross-motor and fine-motor skills in a diversified manner.

The activities were designed to meet the different needs of students with SEN and adapted according to their specific abilities. In particular:

- Balance and stability exercises: Balance activities included walking on drawn lines or low beams, dynamic balance exercises such as jumping on one foot

and maintaining static standing or squatting postures. For children with coordination problems, aids such as ropes and mats were used to provide support and facilitate body control.

- Oculo-manual coordination activities: Exercises in throwing and catching balls of various sizes, games with coloured objects and balls were proposed to improve the precision and speed of movements. For children with attention and concentration difficulties (such as those with ADHD), these activities were broken down into short tasks and interspersed with breaks to keep motivation high and encourage concentration.

- Customised motor pathways: Obstacle paths were created that involved movements such as crawling, jumping and climbing to improve strength and endurance. The obstacles were variable in height and difficulty, so that each child could progress according to his or her skill level. For children with speech impairments, instructions were provided in visual form through illustrated posters, facilitating task comprehension.

- Fine motor exercises: Including activities such as passing small objects or manipulating balls, these exercises improved motor precision and coordination. For children with specific learning disorders (SLD), eye-hand coordination activities related to writing and drawing on blackboards and sheets were used, improving dexterity and autonomy in everyday skills.

- Group activities and cooperative games: Group work was structured through team games such as tug-of-war, relay races and ball movement games. These games not only promoted interaction and cooperation between children with and without SEN, but also fostered social inclusion. Students without SEN were encouraged to offer support to classmates with difficulties, creating a collaborative and positive learning environment in which children with emotional and social difficulties felt motivated and involved

- Self-regulation and body awareness activities: To encourage emotional regulation and behavioural control, breathing exercises and relaxation techniques were introduced during the sessions. These moments of calm helped students with difficulties in emotional regulation to recognise and manage their emotions, enabling them to resume motor activities with greater concentration.

To support students with SEN, an individualised approach was provided, with personalised instruction and the use of positive reinforcement to encourage active participation. The researchers, with the constant support of the teachers,

carefully observed each student to adapt activities in real time, encouraging progress and supporting any difficulties with mediation strategies. In addition, the group context was used as a resource to foster interaction and a sense of belonging, promoting an inclusive learning environment in which each student could feel an active part of the proposed activities.

4. Quantitative Data Analysis and Results

The analysis of the collected data revealed significant differences between the experimental group, which was involved in a structured physical literacy intervention, and the control group, which continued with normal physical education activities. Quantitatively, the TGMD-3 (Test of Gross Motor Development-3) and BOT-2 (Bruininks-Oseretsky Test of Motor Proficiency-2) tests showed a marked improvement in gross-motor and fine-motor skills in the participants' group of the experimental. In particular, the children with Special Educational Needs (SEN) in the experimental group achieved average gains of 15% in TGMD-3 scores and 18% in BOT-2, showing a marked improvement in coordination, balance and motor accuracy compared to the SEN children in the control group, who showed only marginal improvements of between 3 and 5%. The greater growth in the experimental group suggests that a targeted and structured programme can provide effective support to SEN children, bridging some of their specific needs and reducing potential motor skill gaps with peers without SEN. Furthermore, the analyses showed an increase in motor skills even among the children without SEN in the experimental group, with average improvements of 10% in TGMD-3 and 11% in BOT-2, compared to the control group, where the changes were smaller. This result underlines the efficacy of the intervention not only for children with SEN, but also for their normotypical peers, favouring the strengthening of motor skills of all participants involved. The growth in children without SEN indicates that an inclusive approach does not hinder the learning of the normo-typical students, but on the contrary stimulates them through innovative and diversified activities that enhance their motor skills.

In terms of mental l well-being and self-efficacy, the Strengths and Difficulties Questionnaire (SDQ) and Children's Self-Efficacy Scale (CSES) indicated a significant reduction in the scores for behavioural difficulties and an increase in the perception of self-efficacy in the children in the experimental group, especially among the children with SEN. On average, the SDQ scores for behavioural difficulties decreased by 12% in the SEN children in the experimental group,

whereas in the SEN children in the control group the change was not significant. With regard to self-efficacy, the CSES score in the experimental group increased by 20% compared to the control group, signalling an improvement in the children's confidence in their own abilities. This increase in the perception of self-efficacy can be attributed to the fact that the intervention offered successful experiences and positive feedback, which are crucial for the strengthening of children's self-esteem and personal security, especially among those who may have difficulties with everyday activities.

5. Qualitative Data Analysis and Results

The qualitative analysis showed significant differences in group dynamics and emotional well-being between the experimental group, which participated in the physical literacy intervention, and the control group, which continued with normal physical education activities. The teachers used a structured observation grid to monitor aspects such as active participation, cooperation with peers, emotional commitment, motivation and the ability to observe rules during group games. In the experimental group, the children with Special Educational Needs (SEN) showed increasing involvement in the activities, showing steady improvements in social interactions and sense of belonging to the group. In particular, these students showed a greater propensity to collaborate with their peers, demonstrating both autonomy and initiative during cooperative games.

Contrary, in the control group, children with SEN continued to present difficulties in social interactions and compliance with group rules. The teachers noted that these students tended to remain on the fringes of activities, participating less actively and showing little motivation compared to peers without SEN. The difference in attitude and participation between the two groups highlights the importance of a structured and specific intervention to support children with SEN, creating an environment in which they can feel valued and supported. The semi-structured questionnaire administered to the teachers further confirmed these observations. The teachers in the experimental group reported a positive perception of the social and psychological changes observed in the SEN children. On a rating scale, the teachers in the experimental group indicated a 25% improvement in the perception of inclusion and social skills of children with SEN, whereas the teachers in the control group reported only a marginal increase of 5%. The open-ended questions in the questionnaire allowed the teachers to provide specific details: for example, it was observed that some children with

emotional or social difficulties in the experimental group started to actively participate in group games, showing greater self-confidence and an increase in self-esteem. Structured interviews then made it possible to explore the differences between the two groups in greater depth. Teachers in the experimental group emphasised that the physical literacy programme not only improved motor skills, but also social and relational skills, thanks to the inclusive and collaborative structure of the proposed activities. Teachers involved in the study offered detailed observations and comments that further enriched the qualitative analysis, highlighting how the physical literacy programme had a significant impact on the social dynamics and emotional well-being of children with Special Educational Needs (SEN). Many teachers noticed a transformation in the SEN children's attitudes towards group activities: initially more shy and reluctant to participate, as the weeks went by they showed increasing enthusiasm and confidence in tackling the proposed games and activities. A teacher observed that '*some children who initially isolated themselves, at the end of the intervention actively sought the company of their peers and proposed new group games*', a sign of increased self-confidence and desire for social interaction. Other teachers emphasised how the collaborative climate created by the intervention fostered mutual support between students with and without SEN. In particular, it was highlighted that the normo-typical children spontaneously started to show supportive behaviour towards their classmates with difficulties: for example, during a balancing activity, some children without SEN offered a hand to their classmates to help them maintain stability. A teacher commented: '*It was touching to see how children without difficulties developed a sense of responsibility towards their peers, creating a welcoming and respectful environment where everyone felt included and encouraged".* In terms of emotional regulation, many teachers noted a greater ability of SEN children to manage their emotions and deal with frustrating situations during activities'. For example, a teacher reported that a child with difficulties in emotional control, who usually reacted with frustration to mistakes, was gradually able to better manage his reaction and ask for help from his classmates or teachers when he encountered difficulties. *'The inclusion of short moments of relaxation and breathing allowed many children to learn to calm down and face the activities with greater serenity, improving not only their participation but also the quality of their interactions with their peers*' said another teacher. The observations reported by the teachers in the experimental group revealed that the intervention also positively influenced the motivation and involvement of students with SEN. A teacher noted: *'Many children who were initially just observing, actively sought*

their turn to participate in the games at the end of the programme, showing strong motivation and pride in their small achievements'. This motivation was also perceived in the non-SEN classmates, who, according to the teachers, benefited from a positive and collaborative learning environment that encouraged everyone to improve and work together to achieve common goals. Finally, the teachers expressed their satisfaction with the improvement in self-esteem in the SEN children, noting that many of them gained more confidence in their motor and interpersonal skills. A teacher commented that '*seeing the smile on a child's face after succeeding in an exercise that had previously seemed impossible was one of the most gratifying moments'*, highlighting the value of the intervention as a tool for enhancing not only motor skills but also the children's psychological well-being.

In the control group, teachers noted an overall lower involvement in motor activities, especially with regard to children with Special Educational Needs (SEN). students with SEN tended to remain marginalised or to participate passively, showing difficulties in integrating with their peers without SEN. A teacher in the control group observed that '*children with SEN seemed insecure and less motivated during motor activities, often remaining on the sidelines and watching others play, without finding the courage to actively involve themselves.*' This behaviour underlined how the absence of a structured programme limited the opportunities for inclusion and active participation of children with SEN. Some teachers reported that, in the control group, the level of social interaction between children with and without SEN was minimal, and only on rare occasions did spontaneous cooperative moments occur. A teacher explained that '*without specific cooperative activities and without adequate support, children with SEN tended to be excluded from group dynamics.*' The lack of activities specifically aimed at inclusion seemed to have hindered the construction of an environment of mutual support among peers. Another observation highlighted by the teachers in the control group concerned the difficulty of children with SEN in respecting rules and following instructions. As one teacher noted, '*children with behavioural and attention difficulties were unable to concentrate, often left the activity after a few minutes and it was complicated to bring them back to order without specific behaviour management strategies'*. Furthermore, the teachers found low self-esteem among the children with SEN in the control group, pointing out that without a programme that offered experiences of success and positive reinforcement, these students could not develop an adequate sense of self-efficacy. '*I saw children who, after failing an exercise, would immediately give up and had no one to encourage them to try again*' said another teacher, pointing

out that the traditional programme did not provide the necessary support to cope with the emotional difficulties associated with motor activities. The lack of a structured approach also affected the motivation of the normotypical students, who, without innovative or diverse stimuli, tended to perform the activities with less enthusiasm. A teacher commented: '*I noticed that the children without SEN were less involved and were often not motivated to interact with their classmates in difficulty, because the activities were perceived as repetitive and without added value*.' This observation highlighted how, in the absence of an inclusive and diverse programme, motor activities were less attractive and stimulating even for students without SEN, limiting opportunities for learning and growth for the whole group.

6. Discussion

The results obtained from the study convincingly support the hypothesis that a structured educational intervention on physical literacy can significantly benefit children with Special Educational Needs (SEN). Quantitative data show tangible improvements in motor skills, with average increases in scores on the TGMD-3 (Test of Gross Motor Development) and BOT-2 (Bruininks-Oseretsky Test of Motor Proficiency, Second Edition) tests, suggesting that a targeted physical literacy programme not only helps to close the motor skills gap between children with and without SEN, but also contributes to improving students' overall performance.

These results are in line with the findings of Goodway and Branta (2003), who emphasise the importance of personalised interventions in supporting the motor development of children with difficulties. In particular, their research showed that physical literacy is not only a matter of physical skills, but also of developing confidence and self-efficacy, which are essential for personal progress and social integration. Furthermore, the increase in perceived self-efficacy among participants with SEN, evidenced by the analysis of CSES (Children's Self-Efficacy Scale) scores, is consistent with the literature that highlights how successful experiences in motor contexts can strengthen self-esteem and mental well-being (Di Palma & Saraiello, 2023; Logan et al., 2015; Valentini & temeroli, 2023). This aspect is crucial, as increased self-efficacy not only encourages active participation in activities, but also creates a virtuous cycle in which improved motor skills lead to increased confidence in one's own abilities.

Qualitatively, observations on children's attitudes and involvement during activities confirm the effectiveness of an inclusive approach, as indicated by

Casolo (2023) and Haywood & Getchell (2009). These approaches promote not only motor skills, but also foster cooperation and mutual support among peers. Through structured games and activities, the children showed a significant increase in social interaction, a key aspect for the development of interpersonal skills and the building of a positive learning environment. Therefore, the results suggest that an inclusive intervention not only improves motor skills, but also fosters a positive school climate. In this context, children with SEN can feel part of the group, thus contributing to an improvement in social dynamics and interpersonal relationships.

Conclusions

The study showed that physical literacy plays a fundamental role in the overall development of children, especially those with Special Educational Needs. The findings underline the effectiveness of a structured and customised educational intervention in improving not only motor skills, but also the mental well-being and social skills of the participants. As stated by Kirk and Rhodes (2011), a well-designed physical literacy programme can foster inclusion and active participation of all students, creating opportunities to develop positive social relationships. In particular, improved motor skills, documented through the various assessment tools used in the study, result in greater self-efficacy and motivation. These elements are key to educational success, as motivated and confident students tend to participate more actively in school activities, improving not only their individual performance, but also the collective performance of the class. Therefore, it is crucial to implement such programmes in primary schools, as indicated by Italian inclusion legislation, to ensure equal learning and development opportunities for all students.

The inclusion of physical literacy programmes in schools represents not only an educational opportunity, but also an important step towards building more inclusive and stimulating school environments. According to Cottini (2004), inclusion is not only about access to educational services, but also involves creating an environment in which each student can feel valued and part of a community. In this way, physical literacy becomes not only a tool for improving physical skills, but a catalyst for social change and integration, helping to form well-rounded individuals who are well adapted to the challenges of everyday life.

References

Bruininks, R. H., & Bruininks, B. D. (2005). Bruininks-Oseretsky Test of Motor Proficiency, Second Edition (BOT-2). NCS Pearson.

Casolo, F. (2023). La Società Italiana di Educazione Motoria e Sportiva: neurodidattica e ricerca nelle scienze motorie. *Studi sulla Formazione/Open Journal of Education*, 26(2), 75-80.

Clark, J. E., & Metcalfe, J. S. (2002). The mountain of motor development: A metaphor. *Quest*, 54(1), 62-77.

Cottini, L. (2004). *Educazione speciale e integrazione scolastica*. Milano: Franco Angeli.

Di Palma, D., & Saraiello, E. (2023). Stimulating Self-Esteem in Students with SLD through Innovative Teaching in the Motor-Sports Field. *Journal of Inclusive Methodology and Technology in Learning and Teaching*, *3*(1).

Gallahue, D. L., & Donnelly, F. C. (2003). *Developmental physical education for all children* (4th ed.). Human Kinetics.

Goodman, R. (1997). The Strengths and Difficulties Questionnaire: A research note. *Journal of Child Psychology and Psychiatry*, 38(5), 581-586.

Goodway, J. D., & Branta, C. F. (2003). Influence of a motor skill intervention on fundamental motor skill development of disadvantaged preschool children. *Research Quarterly for Exercise and Sport*, 74(1), 36-46.

Haywood, K. M., & Getchell, N. (2009). *Life span motor development* (5th ed.). Human Kinetics.

Kirk, D., & Tinning, R. (1990). *Physical education, curriculum, and culture: Critical issues in the contemporary crisis.* Falmer Press.

Logan, S. W., Robinson, L. E., Wilson, A. E., & Lucas, W. A. (2012). Getting the fundamentals of movement: A meta-analysis of the effectiveness of motor skill interventions in children. *Child: Care, Health and Development*, 38(3), 305-315.

Muris, P. (2001). A brief questionnaire for measuring self-efficacy in youth. *Journal of Psychopathology and Behavioral Assessment*, 23(3), 145-149.

Ulrich, D. A. (2000). *Test of Gross Motor Development-2 (TGMD-2).* Pro-Ed

Valentini, M., & Temeroli, N. (2023). Effetti dell'attività fisica sullo sviluppo del bambino con sindrome di Down: una revisione della letteratura. *GIORNALE ITALIANO DEI DISTURBI DEL NEUROSVILUPPO*, *8*(3), 77-96.