DIDACTICS OF BODY AS A MULTIDISCIPLINARY FIELD RELATED TO INTERCULTURAL COMMUNICATION: COMPARISON BETWEEN ITALY AND BULGARIA

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ABSTRACT
The article explores the integration of movement into primary school learning, focusing on its role in enhancing reading comprehension. Questionnaires with Italian and Bulgarian teachers reveal a shared recognition of its importance, with slight cultural differences. Analysis of 24 studies confirms that physical activity positively influences cognitive processes related to text understanding.

KEYWORDS
Motor activity; physical activity; reading comprehension; primary school; inclusive learning.

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Introduction

For primary school pupils, text comprehension is one of the crucial skills for academic success and cognitive development. From the earliest stages of education, the ability to decode and interpret text information is strongly interconnected with the acquisition of transversal skills such as problem solving and critical thinking (Pazmiño-Zambrano, 2019). Various studies have pointed out that learning in a passive, frontal manner can prove to be an obstacle to learning for many children, particularly for those with cognitive or language difficulties. (Lê et al., 2021).

Recently, the strong interest in innovative pedagogical methodologies has caused the focus to shift towards integrated approaches that connect and unite motor activity with text-based learning processes. (Kosmas & Zaphiris, 2023). In a world where education is becoming increasingly automated and digital, the value of the physical body in the learning process is often underestimated. The body should represent a fundamental tool in continuous interaction with the mind and the environment around us.

The Embodied Cognition approach is based on precisely this principle: the intellect is a system closely connected with the body and the external world, and these three elements work in close cooperation for deeper and more meaningful learning. An individual's knowledge cannot be built solely through the intellectual sphere, but must be stimulated and supported through movement and physical action. The writing hand actively contributes to creating and structuring thought; it is not merely a purely mechanical tool at the service of the mind. (Gòmez Paloma et al., 2016) (Xu & Liu, 2017). Indexicality theory suggests how text comprehension is facilitated by the activation of perceptual-motor simulations. Reading a text is not a purely symbolic act but involves imagination and the simulation of concrete

scenarios. Experimental research shows how the use of movement and object manipulation can improve and support text comprehension in children, as it helps them make more direct connections between words and the concepts they represent. (Glenberg et al., 2004). (Glenberg et al., 2006).

In this context, Aucouturier's thought represents a solid theoretical basis: he considers the body as an instrument of expression and relationship, highlighting how movement is not to be considered a mere physical act, but a language full of meanings, capable of promoting the cognitive, emotional, and social development of pupils. His psychomotor approach reflects an acting body, and not only an acted body, which represents a means through which the pupil builds his or her identity and understanding of the world around them. (Compostella, 2017).

Physical activity also promotes the emotional and motivational aspect of learning, as suggested by Lucangeli; the learning psychology expert affirms that body language is a fundamental educational resource, as it allows for a better relational climate in the classroom and also the well-being of students. Emotions accompany all forms of learning and form the basis for creating an inclusive learning environment and increasing pupils' intrinsic motivation. Motor activity and corporeity can act as mediators between emotions and knowledge by improving text comprehension skills and fostering a positive and inclusive relational climate in various school settings. (Lucangeli & Vullo, 2021). In the Italian educational system, we find an inclusive and flexible approach, which places the pupil at the centre of the learning process and promotes motor activities that support and facilitate cognitive, social, and emotional development. In the Bulgarian educational system, we find a more structured model, where motor activities are integrated into more detailed and rigorous curricula, which emphasise discipline and the consolidation of

basic motor skills. Thanks to this comparison, it was possible to highlight similarities, such as the value of motor activity for learning (MIUR, 2012), and differences, such as flexibility in the application of methodologies and the role of the motor education specialist teacher (Pre-school and School Education Act, 2015/2016) (Ministry of Education, 2021). On this basis, this paper aims to investigate the relationship between motor activity and reading comprehension skills by exploring the effectiveness of movement on cognitive, social, and motivational skills in primary school pupils. To do so, a systematic review of empirical studies demonstrating how motor activity can be effective in promoting reading comprehension skills was structured. In the following, the perceptions of Italian and Bulgarian teachers regarding the importance of movement in school contexts will be analysed. By comparing these two educational contexts, it will be possible to understand how motor activity can best be integrated into learning and teaching paths, contributing to the construction of a school reality that is increasingly equitable, avant-garde, and attentive to the educational needs of all pupils.

Materials and Methods

Systematic Review

The following systematic review has collected and analyzed 24 empirical studies, published between 2000 and 2023, highlighting how movement, corporeality, and physical interaction positively influence and enhance cognitive processes related to textual comprehension. The selected studies highlight how the use of body-based approaches, such as object manipulation, dramatization, and the use of representative gestures, can greatly improve mnemonic skills, the ability to formulate inferences, the construction of

coherent mental models, and the retrieval of information already acquired or in the course of learning, which is essential for developing textual comprehension skills.

Methodology

The systematic review aims to answer the following research question, based on the PICO model (Tab. 1): 'Can the integration of motor activity into learning and teaching pathways improve and support text comprehension in primary school pupils, compared to traditional methods based on passive approaches?'

P	I	C	O
POPULATION	INTERVENTION	COMPARISON	OUTCOME
Pupils aged between 5/6 and 11, with varying levels of reading and text comprehension skills.	Integration of motor activity (movements, gestures, drama, physical exercises) in language learning and reading.	Traditional teaching approaches which do not include motor activities but use passive teaching methods.	Improved text comprehension and language decoding skills.

Table 1
(Source: own elaboration)

The population considered includes pupils aged between 5/6 and 11 years, attending primary school, with different levels of competence in reading and text comprehension. The intervention on which the analysis focuses is the integration of motor activity in language learning and reading, through

movements, gestures, dramatizations and physical exercises. This innovative approach is compared with the traditional teaching methods, which are characterized by a passive approach and lack of methodologies based on the principles of pedagogical activism. The objective of the review is to assess whether the integration of motor activity can promote an improvement in text comprehension and linguistic decoding skills compared with practices that do not involve such physical involvement.

Selection of studies

Based on the initial question, the survey was launched by examining the resources available in the databases EBSCO, ERIC, SPORTDiscus, Pubmed and ScienceDirect, following the PRISMA guidelines. (Moher et al., 2015).

Using keywords and their combinations through the use of boolean operators (and, or, not), articles published in Italian, English and Spanish were searched for between 2000 and 2023.

Later, manual search has expanded to include the Google Scholar database to find keywords in titles, abstracts and descriptors. The search has since been extended to explore synonyms of the main keywords. A systematic analysis of the bibliographies and references contained in the identified publications was carried out.

From databases such as EBSCO, ERIC and Google Scholar 24 protocols were selected, using a combination of the keywords: ‘reading comprehension’, ‘motor activity or physical activity’, ‘primary school’, ‘inclusive learning’).

In the selection of articles, account was taken of:

Inclusion criteria: studies in the 5/6-11 age group with varying levels of reading and text comprehension skills. Empirical research published between 2000 and 2023 in English, Spanish, Italian and Bulgarian was considered. Studies carried out in: U.S.A (10), Turkey (1), United Kingdom (2), France (1), Germany (1), China (1), Netherlands (1), Libya (1), Ecuador (1), Uruguay (1), Italy (2), Cyprus (1) and Bulgaria (1).

Selected studies aimed to examine the effectiveness of techniques based on physical interaction, imagination and body movement in improving text comprehension, Reading and writing skills and cognitive functions for the 5/6-11 age group, assessing how these strategies can be integrated into educational contexts to support academic and psychological development, especially for students with learning difficulties or at risk.

Exclusion criteria: children over 11, adults and elderly people, children under 5; generic studies focusing mainly on motor activity and academic success; articles before 2000; Articles investigating motor activity and mathematics learning, motor activity and health; articles investigating the attitudes of teachers; purely theoretical research.

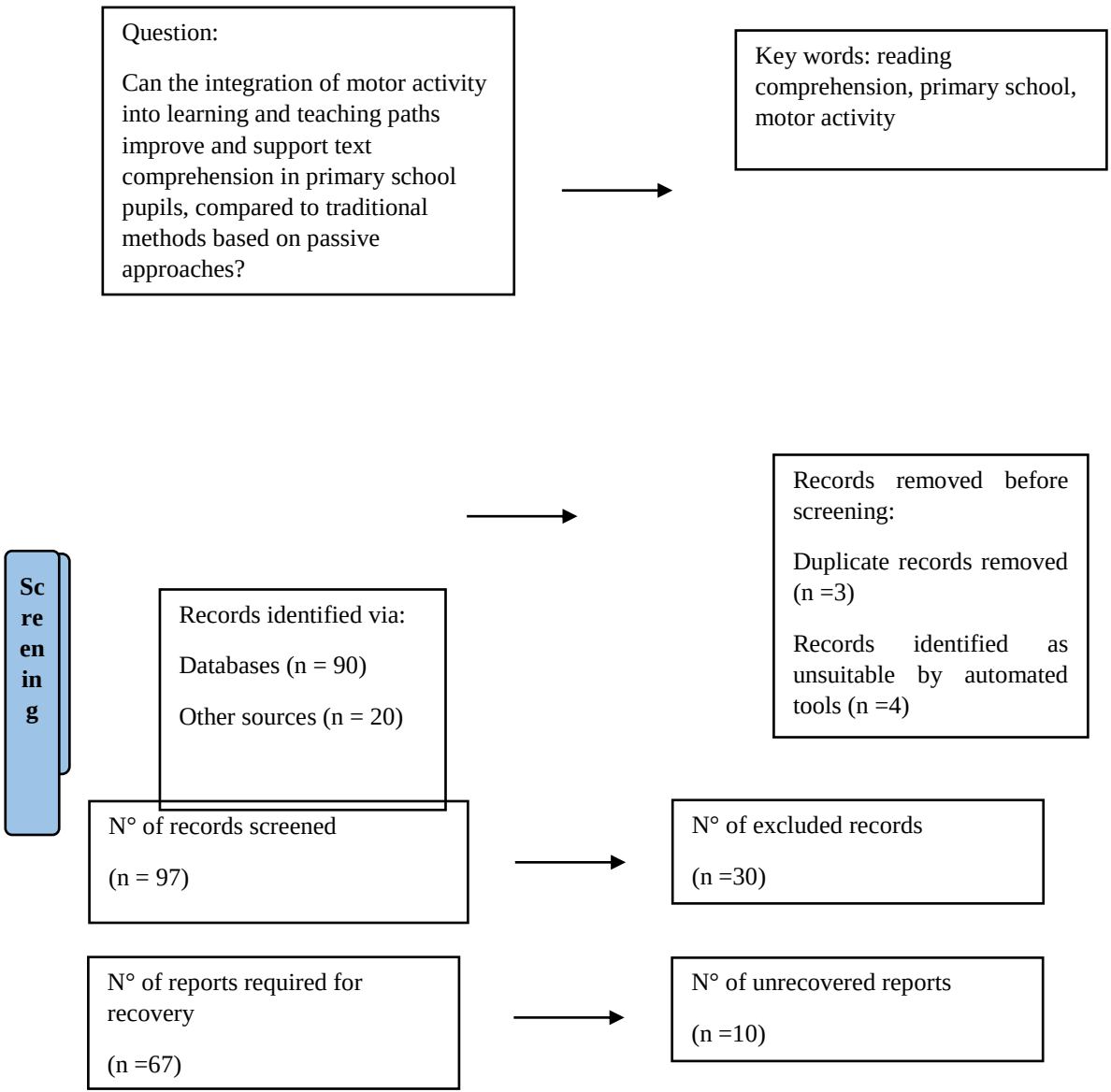
The risks of bias that could affect overall results were considered. Specifically, three main types of bias were analysed: publication bias, time bias and linguistic bias.

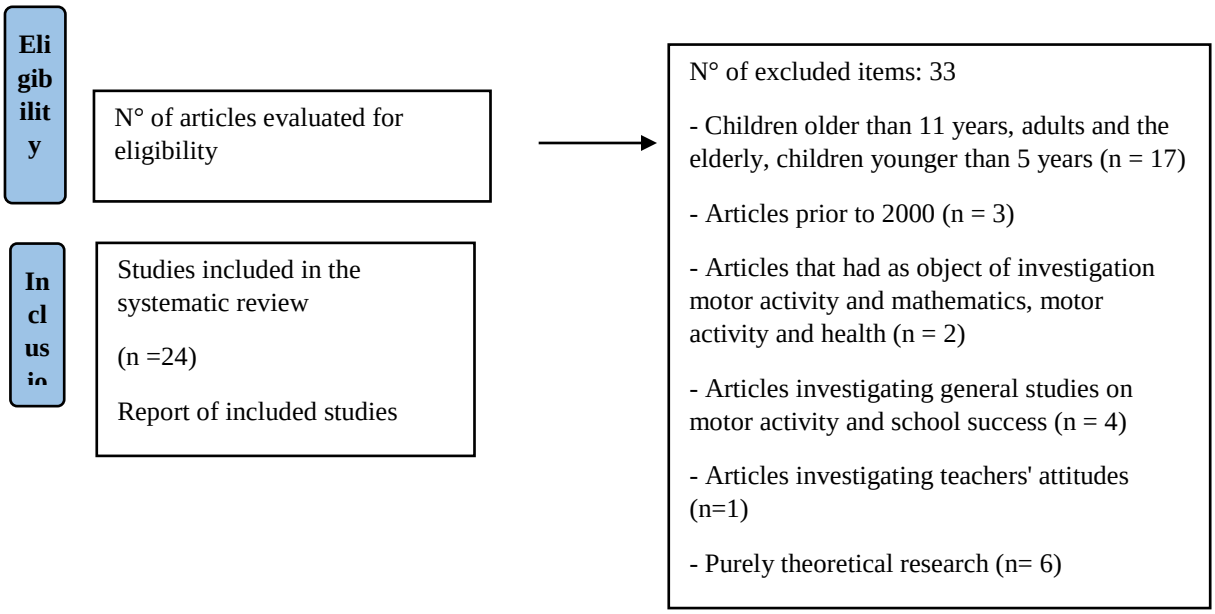
The risk of publication bias has been mitigated by including bachelor's, doctoral and master's theses, commonly known as 'grey literature', which have helped to provide a more balanced and in-depth perspective.

The time bias has been reduced by including studies from a wide time range (2000-2023) to ensure a more balanced representation of results. This approach is useful to avoid a bias towards the most recent results and allows methodological developments over time to be considered.

The linguistic bias has been mitigated by searching for sources in languages other than English. Selected articles in English, Spanish, Italian and Bulgarian.

The diagram below is a flow chart giving a summary of the characteristics of all studies included in the review. (Tab. 2)





Tab.2 *Source:*

Characteristics and summary of data

The 24 protocols selected and included in the systematic review explore the influence of physical and motor activities on learning, with a particular focus on reading comprehension and their impact on cognitive skills in children

aged 5/6 to 11 years. The studies or research considered focus on primary school pupils and, in some cases, also include students with specific difficulties such as attention problems or ADHD.

Context: most studies were carried out in schools, using classrooms as natural settings for interventions. In many cases, activities have been included in the daily lessons, for example those of reading, enriching them with short moments of movement. Other interventions, however, have used specific spaces, such as gyms or outdoor areas in schools, where more structured and elaborate physical activity programs have been organized.

In other studies, motor activities were included as part of the physical education curriculum or during school breaks to assess the effect of short active breaks. More controlled experimental settings were used to monitor the effectiveness of integrating physical activity and learning.

Interventions: the interventions included in the studies are multiple and vary from simple daily movement, such as short active breaks of 10/15 minutes, to more complex and articulated programs, such as dance-based physical education (DBPE), which includes body movements with cognitive and educational exercises. Some studies have also adopted the methodology 'Total Physical Response' or TPR to enhance the development of listening skills and comprehension of texts. The duration of interventions varies: some projects lasted a few weeks, while others, more structured and complex, lasted up to 4 years. Research has taken into account key variables to assess and measure the impact of interventions on the cognitive and physical abilities of pupils included in studies.

Primary outcomes: reading comprehension, attention span, self-control, and motor development are among the aspects examined and analysed. Several

studies have investigated the effect of motor activity on the maintenance of attention during school tasks and on the ability to understand texts read or heard.

Secondary outcomes: self-confidence, motivation to read, and socio-emotional abilities are observed. In some cases, the improvement of executive functions and self-regulation has also been explored, especially when interventions included elements of mindfulness or physical movement.

The tools used for data collection are manifold and have combined both quantitative and qualitative approaches.

Standardised questionnaires and tests: different types of tests were used to assess reading comprehension, self-esteem, and motivation. The researchers used different types of tests, such as the Gates-MacGinitie Reading Test and the Beery-Buktenica Developmental Test of Visual-Motor Integration (VMI), which were used to detect cognitive and motor skills.

Behavioural measures: tools such as direct observation and monitoring of physical and cognitive effort were used in the course of classroom activities. These tools were intended to assess students' progress in relation to behaviour and attention.

In some protocols, textual comprehension was assessed through children’s answers to questions based on proposed readings.

Clinical and neuropsychological tools: in some studies, clinical tests were used to assess motor development, such as the EVANM test for visual-motor integration and the King-Devick test for eye movements.

Results

The study entitled 'Imagery-Based Learning: Improving Elementary Students' Reading Comprehension With Drama Techniques' (2000) by Rose, S.D. et al., investigates the effectiveness of the theatrical techniques used to enhance and improve textual comprehension skills in primary school children. The results were mainly positive: there was a marked improvement in understanding for the experimental group. Dramatization has encouraged and enhanced the memorization and assimilation of key concepts.

The study by McMahon, Rose, and Parks (2003), 'Basic Reading Through Dance Program: The Impact on First-Grade Students' Basic Reading Skills,' explored the use of dance and movement to develop basic reading skills in elementary school children, confirming the effectiveness of physical activities in learning. The results of this research have highlighted significant findings: integrating dance into literacy lessons not only transforms learning more engaging and interesting experience, but it also provides valuable support for children who are struggling with traditional methods, especially in disadvantaged socio-economic contexts.

The study by Glenberg et al. (2004), entitled 'Activity and Imagined Activity Can Enhance Young Children's Reading Comprehension,' explores how physical or imaginary manipulation of objects described in texts may improve reading comprehension in children. The results showed that children involved in physical or imagined manipulation of objects had a better textual understanding than subjects reading without manipulation.

The study by Glenberg, A. M., Brown, M., and Levin, J. R. (2006) entitled 'Enhancing comprehension in small reading groups using a manipulation

strategy' is an evolution of previous research conducted by Glenberg and Levin in 2004, where it was shown that physical activity and imagination could improve reading comprehension in young children. The results confirmed that both physical and imagined manipulation improve reading comprehension. In addition, the study found that observation of a partner manipulating objects can also promote understanding, demonstrating that learning can also be achieved through observation.

The study by Uhrich, T. A., and Swalm, R. L. (2007) entitled 'A Pilot Study of a Possible Effect from a Motor Task on Reading Performance' explores whether participation in a two-manual coordination program, based on the activity of 'sport stacking' (stacking glasses), can positively influence the reading ability of fifth-graders. The results showed how these stacking sports sessions had a positive effect on textual comprehension skills.

The study by Block, C. C., Parris, S. R., Whiteley, C. S., (2008) entitled 'CPMs: A Kinesthetic Comprehension Strategy' introduced a revolutionary strategy to improve and support reading comprehension in primary school children through body movements, Comprehension Process Motions (CMPs). The results suggest that the integration of CMP has increased pupils' metacognitive awareness in relation to comprehension strategies and how kinesthetic movements are a significant support tool for reading comprehension and pupils who have difficulties in following a traditional approach.

The study by Polite, C. P., (2012) entitled 'Incorporating Reading in an Elementary Physical Education Program with the Utilization of the Physio-Cat Program to Improve Fifth-Grade Reading-Comprehension Skills' explores the effectiveness of the Physio-Cat Program, an interdisciplinary approach that integrates physical education with the development of reading comprehension

skills in fifth grade children. The results, highlighted by the use of the Physio-Cat Program methodology, claim that reading skills can be greatly improved if a meaningful connection between motor activity and critical thinking is created, able to stimulate and support effective learning.

In another study, conducted by Cutica, Ianì and Bucciarelli in 2014, entitled 'Learning from Text Benefits from Enactment', it was investigated the effect of the use of gestures during the reading of scientific texts on the understanding and recall of information in primary school children. The results showed that children who used gestures during reading remembered more correct information and produced more inferences than those who read without gesturing.

The study by Scudder et al. (2014) 'The association between aerobic fitness and language processing in children: Implications for academic achievement' examined the link between aerobic fitness and language processing in children, to understand how physical fitness affects cognitive abilities and academic performance. The research findings highlight how physical activity promotes health, supports and increases cognitive and language development, and has a positive effect on school performance.

The research conducted by McClelland, E., Pitt, A., Stein, J. (2015), entitled 'Enhanced academic performance using a novel classroom physical activity intervention to increase awareness, attention, and self-control: Putting embodied cognition into practice' investigated the effectiveness of the Move4words program, a classroom physical intervention based on embodied cognition with significant results in academic performance, especially among students with difficulties.

The study by De Koning, B. B., Bos, L. T., Wassenburg, S. I., & van der Schoot, M. (2016) entitled 'Effects of a Reading Strategy Training Aimed at Improving Mental Simulation in Primary School Children' analyses the effectiveness of a mental simulation training to enhance reading comprehension in primary school children, encouraging them to recall their sensorimotor experiences to build a representation of the text. The results show that there has been significant progress in reading comprehension and motivation for students in the experimental group.

The study by Kaschak, Connor e Dombek (2017) 'Enacted Reading Comprehension: Using Bodily Movement to Aid the Comprehension of Abstract Text Content' has developed the efficiency of the methodology 'Enacted Reading Comprehension' (ERC). The ERC methodology is also a valuable support in the educational field: it improves the understanding of complex contents, especially for pupils who have greater difficulty of comprehension.

The study by Valentini, M., Gasparri, A., Lucertini, F. (2017) entitled 'Motor education and lateralization: the perfect combination to learn. A primary school research project' explores how a targeted motor education programme can help develop the prerequisites for reading and writing in first-grade. The results showed that the experimental group showed significant improvements compared to the control group in reading-writing skills, motor skills and lateralization.

The study by Carballar, R., Martín-Lobo, P., & Gámez, A. M. (2017) entitled 'Relación entre habilidades neuropsicológicas y comprensión lectora en Educación Primaria' explores how some neuropsychological skills may affect reading comprehension in primary school students. It suggests how targeted neuropsychological activities (visual-motor coordination exercises) can

enhance and improve reading comprehension and promote success in the student's school career.

Pazmiño-Zambrano's study (2019) 'Las habilidades motoras y lectoescritura en el alumnado de 2o año de Educación Básica' investigated the link between motor skills and reading and writing competence in second-grade children and highlighted how good coordination supports and facilitates the learning of reading-writing, emphasizing the importance of integrating psychomotor activities into school curricula to promote a comprehensive development of the pupil.

The study by Xu, Z., & Liu, D. (2020) entitled 'A comparison of embodied methods to improve Chinese children's reading comprehension: observed and participant performed manipulations' wants to see if the physical or observed manipulation of objects could improve reading comprehension in children. The analysis revealed that direct manipulation had the greatest effect on reading comprehension, followed by observation. These results reflect the benefits already observed by Glenberg, with Xu and Liu confirming that observation can also improve text comprehension.

The study by Makopoulou, K., Neville, R., & McLaughlin, K. (2020) entitled 'Does a dance-based physical education (DBPE) intervention improve year 4 pupils' reading comprehension attainment? Results from a pilot study in England' explores how dance-based educational intervention can improve reading comprehension in fourth grade children. The results suggest that integrating dance into physical education lessons may be a useful strategy to improve text comprehension, providing a combination of physical and cognitive engagement that supports reading learning.

The study by Lê M., Quémart P., Potocki A., Gimenes M., Chesnet D., Lambert E., (2021) entitled 'Modeling the influence of motor skills on literacy in third grade: Contributions of executive functions and handwriting' explores how motor skills can influence literacy in third-grade children, considering the mediating role of executive functions and handwriting.

The results showed that motor skills influence reading and writing, stimulating executive functions and manual writing.

The research by Müller et al. (2021), entitled 'Short breaks at school: effects of a physical activity and a mindfulness intervention on children's attention, reading comprehension, and self-esteem' included 241 fourth- and fifth-grade students. The results showed that physical activity and mindfulness improved and enhanced attention and reading comprehension, indicating how these breaks had a positive impact on school learning.

The research conducted by Flanigan (2021), entitled 'Using Physical Activity To Improve Reading Comprehension' was carried out in the United States and involved 18 third-grade students, some of whom have difficulties in reading. The results show that the integration of motor skills into reading activities had positive effects on children's textual comprehension and motivation to learn, especially for pupils who had difficulties in reading.

Kosmas and Zaphiris research (2023), entitled 'Improving students' learning performance through Technology Enhanced Embodied Learning: A four year investigation in classrooms' in Cyprus examined the effect of technology-enhanced learning through an approach called Embodied Learning (EL). The results show a marked improvement in memory and language skills; an increase in motivation to learn and more active participation by pupils.

The study by Monteclaro, M. T. C., & Abugadam, N. B. (2023) entitled 'The Effect of Teaching Short Stories on Listening Comprehension of Third Grade Libyan Pupils Using Total Physical Response' aims to verify the effectiveness of the methodology Total Physical Response (TPR) to improve the understanding of listening in third-grade children in Libya.

The results showed significant progress in listening comprehension and increased active participation.

Discussion

The review of programmes integrating motor activity to develop text comprehension in primary school children confirms that movement is a significant resource for facilitating cognitive processes, supporting reading comprehension in particular. Numerous studies, including those by Glenberg et al. (2004) and Kosmas & Zaphiris (2023), highlight the effectiveness of body techniques, such as the manipulation of objects or the use of representative gestures, in creating stronger mental links between text and meaning. These programs encourage a construction of meaning through physical interaction, consistent with the Theory of Embodied Cognition, according to which the body is an integral part of cognitive processes. Data suggest that physical experiences, when aligned with narrative content, act as 'scaffolding' for deeper and more stable learning, also supporting the hypothesis of Glenberg's Indexical Hypothesis (1997).

In multicultural contexts or contexts students with learning difficulties, the existing literature highlights how physical activity can facilitate the process of information acquisition, if used strategically during teaching activities. Following this perspective, methodologies such as the Total Physical Response

(TPR), illustrated by Monteclaro & Abugadam (2023), can be considered as an added value to enhance and improve the process of linguistic understanding.

Movement-based methodologies enhance textual comprehension, social skills, and motivation, allowing inclusive and participatory learning. The review cites diverse studies across cultural contexts, emphasizing motor activity's role in text understanding and memory. This systematic review has the merit of highlighting a multidimensional approach to learning text comprehension through the integration of motor activity, exploring methods ranging from physical manipulation of objects to dramatization, to kinesthetic representation. Challenges include lack of long-term studies, varied evaluation methods, and implementation issues rooted in teacher training and resources, necessitating further research.

The questionnaire

The questionnaire was designed using a combination of closed and open-ended questions addressed to teachers of Italian/Bulgarian and motor education in primary schools in the region of Marche (Italy) and in the city centre of Sofia (Bulgaria). With a four-level Likert scale, the questionnaire (27 questions) was divided into several sections that aim to explore various aspects related to teachers' experiences and opinions.

The objective of this quantitative analysis is to understand teachers' perceptions in relation to the importance of motor activity for learning, with a particular focus on developing textual comprehension skills through body-based approaches, in line with the theory of Embodied Cognition. The Italian questionnaire was given to all

primary schools in the region of Marche, in the provinces of Ancona, Ascoli Piceno

and Fermo, Macerata and Pesaro-Urbino. The number of teachers who replied to the questionnaire was 376. The Bulgarian questionnaire was disseminated via Google Forms to the Primary Schools in the city centre of Sofia. The total number of teachers who replied to the questionnaire was 139.

The Italian and the Bulgarian questionnaires

Comparison of answers by qualification

The value of motor activity as a discipline, promoting quality learning by both graduates and non-graduates is recognised. Lecturers with master's degrees present an approach that reflects more their practical experience, with more positive opinions, while colleagues with university education present a more theoretical approach influenced by their course of study, with more articulated opinions.

Both groups of teachers confirm the value of corporeality for learning and the importance of considering educational spaces according to an interdisciplinary vision, although university-trained teachers are more likely to move beyond the traditional idea that space determines the type of learning.

Finally, the high rate of participation in the open question on motor involvement experiences reflects a certain propensity to try out innovative approaches within the school context, with a slightly higher percentage of graduate teachers.

Comparison of answers by gender

The value of motor activity as a discipline that supports and promotes quality learning is widely shared by both genders, with no significant differences.

Male lecturers are generally positive and consistent in their opinions, whereas female lecturers tend to be more articulate, suggesting a greater willingness to explore the theme from different perspectives and also taking into account the negative aspects and possible limitations or criticalities.

Both groups of teachers confirm the importance of considering educational spaces from an interdisciplinary perspective, although men are more likely to go beyond the traditional idea that space determines the type of learning. The centrality of the motor education specialist in the educational context is widely recognized and shared by both sexes, with a certain percentage of non-answers, probably related to the lack of direct experience.

Finally, the significant number of participants in the open question on motor involvement experiences reflects a certain propensity to try out innovative approaches within the school context, with a slightly higher percentage of female teachers.

Comparison of answers by age group

In general, both age groups show a shared perception of the importance of motor activity as a discipline to support learning, with slight non-significant differences between the two groups, probably due to the use of different approaches and visions.

The 25-45 age group has more positive and innovation-oriented opinions, while the 46-70 age group has more complex responses, probably due to a more critical reflection based on their practical experience.

Both groups of teachers are inclined to consider corporeality as a fundamental element for quality learning and agree on the use of educational spaces in a flexible and interdisciplinary way, albeit with a coexistence between traditional and innovative visions. The centrality of the motor education specialist in the educational context is widely recognized.

However, although they share a generally positive view of the value of the education figure of the motor education specialist, there is also a significant percentage of teachers who have not expressed any opinion on this subject.

In conclusion, the comparison between the answers of the Bulgarian and Italian teachers presents two different educational realities with different approaches, which support pupils' learning and well-being through the value of movement. Both nations reflect in order to enrich educational practices and approaches, promoting the dialogue between tradition and innovation.

Conclusions

The value and importance of motor activity as a discipline that can promote the development of text comprehension and reading-writing skills in primary school emerged. (Güngör, 2008).

The positive effects seen from using motor activity in various contexts suggest that it not only promotes the development of language skills but also has the opportunity to create a more inclusive and participatory learning environment. (Kosmas & Zaphiris, 2023).

In this context, movement becomes a vehicle to facilitate the construction of meaning, refining the representation of information and the ability to connect new concepts to previous knowledge. (Cutica et al., 2014).

Further studies focused on how fine motor skills, in particular handwriting, influence the development of language skills and text comprehension (Lê et al., 2021). Evidence indicates that motor skills are able to influence the development of reading and writing skills through the mediation of executive functions and the ability to combine information coherently. (Lê et al., 2021; Carballar et al., 2017). This relationship is particularly visible in children with learning disabilities, where movement-based neuropsychological intervention can improve the quality of their academic performance and close the gap with their peers. (Pazmiño-Zambrano, 2019).

Action-based approaches, such as the TPR (Total Physical Response) method, have confirmed how performing physical actions related to vocabulary and narrative structure encourages a deeper and more meaningful understanding, facilitating the acquisition of new words and understanding of complex texts. (Monteclaro & Abugadam, 2023; Flanigan, 2021).

In multicultural contexts, this approach is particularly effective as students have the opportunity to benefit from methodologies that combine linguistic and physical aspects to overcome language and cultural barriers. (Monteclaro & Abugadam, 2023; Glenberg et al., 2004).

In short, the systematic review highlights how integrating motor activity into language learning pathways provides significant benefits for text comprehension, emotional regulation and improved cognitive skills. (Müller et al., 2021).

However, there are gaps in the research, specifically regarding the optimal conditions for the application of these interventions and the underlying neuropsychological mechanisms that mediate their effectiveness (Polite, 2012; Lê et al., 2021). Future research should investigate more deeply the

interdependence between movement and learning, considering individual differences and specific educational contexts' characteristics (Cutica et al., 2014; Glenberg et al., 2004).

From a methodological point of view, the study was organized through a combination of theoretical analysis, systematic review and an empirical survey by questionnaires to Italian and Bulgarian teachers.

The study highlights the significance of motor activity in developing text comprehension and reading-writing skills in primary school.

Specifically, fine motor skills related to handwriting play a crucial role in developing language abilities. Research indicates that motor skills influence reading and writing through executive functions. This impact is particularly evident in children with learning disabilities, where movement-based interventions can improve academic performance.

Methods like Total Physical Response (TPR) demonstrate that physical actions related to vocabulary and narrative structure encourage deeper understanding and the acquisition of new words. In multicultural contexts, these approaches help overcome language and cultural barriers.

The comparison between the Italian and Bulgarian educational systems reveals that both nations recognize the importance of motor activity, albeit with differing approaches. Italy values an interdisciplinary approach, while Bulgaria integrates motor activity within a more traditional framework. Both systems present opportunities for integrating traditional and innovative methods.

Despite the positive results, the study has limitations, such as insufficient in-depth analysis of classroom practices and a need for a broader sample to include diverse socio-cultural contexts. Future research could explore the role

of motor activity in other educational settings or specific student groups, including those with special educational needs.

References

Carballar, R., Martín-Lobo, P., & Gámez, A. M. (2017). *Relación entre habilidades neuropsicológicas y comprensión lectora en Educación Primaria.* Revista de Neuropsicología, 13(1), 45-57. **https://doi.org/10.18861/cied.2017.8.2.2686**

Compostella, S. (2017). La pratica psicomotoria di Bernard Aucouturier. In I. Padoan (Ed.), *Comunicazione e linguaggi non verbali: Variazione sul corpo: pratiche educative, rieducative, terapeutiche (Vol. 2, pp. 83–92)*. Lecce: Pensa MultiMedia Editore.

Cutica, I., Ianì, F., & Bucciarelli, M. (2014). *Learning from text benefits from enactment.* Reading Psychology, 35(6), 547-576. DOI 10.3758/s13421-014-0417-y

Flanigan, J. (2021). *Using Physical Activity to Improve Reading Comprehension.* Journal of Educational Psychology, 113(3), 456-468. https://nwcommons.nwciowa.edu/cgi/viewcontent.cgi?article=1329&context=education_masters

Glenberg, A. M., Brown, M., & Levin, J. R. (2006). *Enhancing comprehension in small reading groups using a manipulation strategy.* Contemporary Educational Psychology, 32(4), 389-399. https://doi.org/10.1016/j.cedpsych.2006.03.001

Glenberg, A. M., Gutierrez, T., Levin, J. R., Japuntich, S. J., & Kaschak, M. P. (2004). *Activity and imagined activity can enhance young children's reading comprehension*. Journal of Educational Psychology, 96(3), 424-436. https://doi.org/10.1037/0022-0663.96.3.424

Gomez Paloma, F., Ascione, A., & Tafuri, D. (2016). *Embodied cognition: Il ruolo del corpo nella didattica*. Formazione & Insegnamento, 14(1), 75-88. https://doaj.org/article/409a98f829be4f89a769a4c178c6937c

Kosmas, P., & Zaphiris, P. (2023). *Improving students' learning performance through technology-enhanced embodied learning: A four-year investigation in classrooms.* Educational Technology Research and Development, 71(2), 159-177. https://doi.org/10.1007/s10639-022-11466-x

Lê M., Quémart P., Potocki A., Gimenes M., Chesnet D., Lambert E. (2021). *Modeling the influence of motor skills on literacy in third grade: Contributions of executive functions and handwriting.* Reading and Writing, 34(5), 1351-1370. https://doi.org/10.1371/journal.pone.0259016

Lucangeli, D., & Vullo, L. (2021). *Il corpo è docente. Sguardo, ascolto, gesti, contatto: la comunicazione non verbale a scuola.* Trento: Erickson.

Ministero dell'Istruzione, dell'Università e della Ricerca. (2012). *Indicazioni nazionali per il curricolo della scuola dell'infanzia e del primo ciclo d'istruzione*. Accessed 7 June 2025, da https://www.miur.gov.it/documents/20182/51310/DM+254_2012.pdf

Ministero dell'Istruzione. (2021). *Insegnamento di educazione motoria nelle classi quinte della scuola primaria da parte di docenti specialisti. Chiarimenti per l'anno scolastico 2022/2023*. - https://www.miur.gov.it/

Monteclaro, M. T. C., & Abugadam, N. B. (2023). *The effect of teaching short stories on listening comprehension of third-grade Libyan pupils using Total Physical Response.* Journal of Language Teaching and Research, 14(1), 15-24. https://lam-journal.ly/index.php/jar/article/view/529/418

Müller, C., Otto, B., Sawitzki, V., Kanagalingam, P., Scherer, J.S., Lindberg, S (2021). *Short breaks at school: effects of a physical activity and a mindfulness intervention*

on children's attention, reading comprehension, and self-esteem. Journal of Educational Psychology, 113(6), 1035-1047. https://doi.org/10.1016/j.tine.2021.100160

Pazmiño-Zambrano, M. J. (2019). *Las habilidades motoras y lectoescritura en el alumnado de 2º año de Educación Básica.* Revista Internacional de Educación, 18(3), 60-78. DOI: 10.23857/dc.v5i3.935

Polite, C. P. (2012). *Incorporating reading in an elementary physical education program with the utilization of the Physio-Cat program to improve fifth-grade reading-comprehension skills*. International Journal of Physical Education, 49(4), 22-27.

Pre-school and School Education Act. (2015/2016). *State Gazette No. 79/13.10.2015*. Accessed 5 June 2025, da https://lll.mon.bg/uploaded_files/ZAKON_za_preducilisnoto_i_ucilisnoto_obrazovanie_EN.pdf

Xu, Z., & Liu, D. (2020). *A comparison of embodied methods to improve children's reading comprehension.* Journal of Educational Research, 110(6), 594-603. **https://doi.org/10.1111/1467-9817.12329**