Study combines storytelling and movement to improve language and motor skills in early years

January 19 2024

Dr Anna Cunningham, School of Social Sciences. Credit: Nottingham Trent University

Combined storytelling and movement lessons delivered by teachers can

improve language and gross-motor skills in young children, according to a new study by psychology and sport science experts at Nottingham Trent University and Coventry University.

For the study, researchers tested a 12-week week movement and storytelling program (MAST) that aims to improve movement and language skills among 4- and 5-year-olds, and investigated whether it was feasible to be delivered by Reception teachers in primary schools.

Nine schools with average and below average numbers of Pupil Premium children were selected and randomly chosen to either take part in the MAST trial, or continue with their usual PE curriculum.

Teachers in the intervention group were trained to run two 35 minute sessions per week based on popular children's books, The Gruffalo and Stick Man, which start by focusing on language (5 mins), then movement (25 mins), and finally, language again (5 mins)—with the last language section targeting a time where the brain is primed for learning due to increased blood flow following exercise.

More than 210 Reception children were tested on their language and movement skills at pre-and post-trial, including expressive and receptive language. They were also videoed undertaking a series of movements measuring locomotor and object skills.

Findings showed that those in the MAST group experienced a significant positive effect on their standardized language skills and fundamental movement skills—both of which were of educational significance.

The children showed the greatest improvements in sentence repetition and expressive vocabulary, as well as in their locomotor skills, such as running, jumping, hopping and skipping.

Dr. Anna Cunningham, senior lecturer in Developmental Psychology at NTU's School of Social Sciences, said, "Basic movement skills such as throwing, catching, and jumping are key factors in creating more active children, with health, social and academic benefits. Similarly, good language skills such as vocabulary and understanding narrative are an essential foundation to academic achievement.

"Despite this, both motor and language skills are poor in British 5-year-olds compared to other European countries, particularly for children from disadvantaged backgrounds.

"MAST is a fun and easy to implement way of closing this gap and shows the benefits of using PE lessons as an opportunity to improve both physical and linguistic development in a more effective way.

"We did, however, experience that the wider issue of PE being a lesser priority for many school leaders indirectly led to some difficulties in delivering MAST due to lack of hall availability, lack of Teaching Assistant support and insufficient equipment. We hope that an extension of the PE and Sport premium means that the subject will start to become more important to school leadership teams.

"We also hope it will encourage more responsible use of the money, for example training teachers who generally qualify with very little experience in physical education to facilitate programs such as MAST."

Eleanor Ireland, program head in Education at the Nuffield Foundation, said, "We know that early language and movement skills are key for children's later development, and are a key part of the Early Years Foundation Stage yet children from disadvantaged areas often lag behind in these areas- and this gap has been exacerbated by the COVID-19 pandemic.

"We are really pleased to see positive findings from this study of the MAST intervention, and the findings represent an important development in understanding how we can support young children, particularly those living in disadvantaged areas in improving these skills, through this fun and playful program."

More information: MAST report: www.ntu.ac.uk/__data/assets/pd … ublicReportFinal.pdf

Provided by Nottingham Trent University