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Editorial

It is a pleasure to present this next issue of the Journal of Neuroeducation, which concludes its fourth volume, this time focusing on physical activity as an opportunity to develop, improve and optimise learning processes.

Dr Marc Guillem Molins, professor and researcher at the University of Barcelona, has written the monograph that opens this new issue of the Journal of Neuroeducation. In his editorial, Dr Guillem Molins emphasises the importance of physical activity for brain development and learning. He highlights the influence of exercise on neurogenesis, synaptogenesis, angiogenesis and brain plasticity, as well as its role in improving cognitive and academic functions at different stages of life. It also highlights how integrating physical activity into the educational environment can optimise attention, memory and executive function, providing a comprehensive approach to cognitive development and learning.

With this, on the one hand, the Roig's article "Acute Physical Activity for Motor and Academic Learning in Education-based Settings" examines how acute physical activity (APA) can improve motor and academic learning in educational settings. Based on previous studies, it is suggested that APA can facilitate skill acquisition during practice and consolidate long-term memory, thus promoting motor and academic learning. It aims to incorporate APA strategies strategically throughout the school day to promote both declarative and motor learning. The article discusses practical considerations for implementing these interventions in schools and assesses the limitations of previous research.

On the other hand, the article "Showcasing the Chilean Cogni-Action Project: Connections between Physical, Cognitive, and Socioeconomic Factors in a Large Sample of Schoolchildren" by Doherty and collaborators focuses on the Cogni-Action project in Chile. This project examines how physical, cognitive and socio-economic factors are related to the development of Chilean schoolchildren. Using a large and diverse dataset that includes physical, psychosocial, cognitive and lifestyle variables, as well as neuroimaging, the study provides a comprehensive view of the impact of these factors on children's cognitive and academic performance, and highlights the importance of physical activity and fitness in this context.

Three other papers are presented in the neuroeducational research section. The article "Neurodidactic Intervention on Executive Functions in Adolescents" by Álvaro Muchiut and collaborators examines the influence of specific pedagogical practices on the development of executive functions in adolescents. The longitudinal study includes experimental and control groups and shows significant results in improvements in planning, working memory, cognitive flexibility, inhibitory

control and attention in the experimental group. This work highlights the importance of incorporating specific activities into the school curriculum to promote cognitive skills in adolescents.

This section continues with works that provide a bibliometric analysis of the evolution and scientific production related to neuroeducation from 2000 to 2022. Using the Web of Science database, the study by Pablo Dúo Terrón identifies the most relevant terms and key words, shows how they have changed over time and highlights emerging themes such as “college”, “skills”, “knowledge” and “motivation”. This research provides a valuable perspective for future lines of research in the educational field of neuroeducation.

Finally, this section concludes with the article “Creativity in Venezuelan university students: beliefs, perceptions and abilities” by Martínez, Vélez and Carvajal, which examines the understanding of creativity among Venezuelan university students. Through the neuroeducational project CREA (creation, retention, emotion, attention), the study examines beliefs about the role of the brain in creativity, perceptions of creativity in different professions, and the relationship between self-perception of creativity and the implementation of creative solutions. Using Guilford’s Alternative Uses Test, the study reveals interesting differences in the perception and practice of creativity between disciplines, challenging some common stereotypes and myths about creativity.

The Experiences and Perspectives section opens with the mind-body connection and emotions and their relationship to health and illness. The work of Leire Irazu and Álvaro Campillo focuses on their interrelationship, emphasizing how this connection affects both health and illness. They propose a holistic and multidisciplinary approach to the treatment of physical and mental illness, highlighting the importance of consciousness, emotional regulation, language, the immune system and nutrition. The article highlights the need for more research to fully understand this relationship and improve the quality of human life.

“Educating for Becoming: Developing generative resilience and growth mindset in primary education” by Montesinos offers an innovative pedagogical proposal. This proposal focuses on the development of generative resilience and growth mindset in primary school students, integrating strategies based on neuroscience and psychology. The article presents a practical approach to implementing these concepts in the current curriculum, providing concrete examples and pedagogical strategies to foster students’ personal and social development.

Next, Kundan Lal Verma’s article “Electrophysiological Correlates (EEG) of Reward Effects on Early Sensory Perception in Humans” examines how reward value affects early sensory perception. Using electroencephalography (EEG) and signal processing techniques, the study proposes that value selection of our choices can suppress sensory representations of low-value stimuli while enhancing high-value ones. This innovative approach opens up new possibilities for understanding the interplay between attention/reward and cognitive control, and provides a unique insight into how reward-based decisions affect sensory perception.

For their part, Melissa Peyro-Paz, Carmen Rojas-García and Paola Flores-Rodríguez propose a model for the early identification and channelling of learning, emotional and neurodevelopmental problems in primary education. This model aims to integrate education and mental health by providing teachers with practical tools to identify and refer cases to specialists, with the aim of improving children's quality of life and academic performance. The model aims to bridge the gap between education and mental health by providing teachers with tools to identify and refer cases to specialists.

At the end of the issue, you will find all the articles in our much appreciated Neuro-mads section, so that young people can have access to the latest advances in the field of neuroeducation. In this section you will find 9 summaries corresponding to the articles that accompany each issue, and it is from here that we pay tribute to the work of the young people who have been with us over the last few months, who are part of the great family that is this journal, and who have made this collaboration possible.

With the publication of this fourth volume of the Journal of Neuroeducation, we embark together on a journey through the exciting world of neuroeducation. Our exploration takes us from the transformative impact of physical activity on learning to the depths of student creativity, traversing the emerging field of neurodidactics and the latest research on resilience and cognitive development. Each article, carefully selected and presented, is a testament to the tireless work of educators, researchers and students dedicated to enriching our understanding of how we learn and grow.

This issue is not just a collection of studies and experiences; it is an invitation to reflect, question and apply this knowledge in our classrooms, homes and communities. We encourage you to immerse yourself in these pages, not just as a reader, but as an active participant in this exciting learning adventure. May each article inspire, challenge and equip you with new perspectives and tools to transform education and human development. To you, our community of readers, educators, researchers and neuroeducation enthusiasts, we extend our sincere gratitude for your continued support and curiosity.

The team of the Journal of Neuroeducation, sponsored by the UB-EDU1st Chair of Neuroeducation, wishes you an enjoyable reading experience. ■

Laia Lluch, Anna Forés, David Bueno