

Contribution ID: 230 Tür: Oral Presentation

# Neuromyths in Education: A Cross-Cultural Comparative Study of 11 Countries

18 Aralık 2024 Çarşamba 14:30 (30 dakika)

Aims: This research aims to provide a comprehensive comparative analysis of primary school teachers' beliefs in neuromyths related to brain function and learning. It examines how formal and informal sources shape these beliefs across diverse cultural and linguistic contexts. As the largest study of its kind, data were collected from teachers in 11 countries, including Belgium, Cameroon, Canada (Quebec), Greece, Kazakhstan, Malaysia, Mali, Morocco, Senegal, Taiwan, and Turkey, in eight languages.

Method: The study employs a descriptive design, utilizing a survey to investigate the prevalence of enduring neuromyths and explore the sources informing teachers'understanding of learning and intelligence that underpin these myths. The Multilingual Neuromyths Identification Questionnaire, developed and adapted by the research team, was administered in eight languages: French, English, Turkish, Greek, Kazakhstani, Arabic, Malay, and Chinese. This study provides valuable insights into the global landscape of beliefs about learning. Results: The results reveal that 13 out of 21 neuromyths, notably "learning styles" and "multiple intelligences", were widely spread, with 90% of endorsement or more. Formal learning sources, such as teacher training programs and textbooks, predominantly reinforce these misconceptions, whereas informal sources, like social media, play a lesser role. These findings underscore the urgency to integrate evidence-based neuroscience and cognitive psychology knowledge into teacher education programs. Our conclusions suggest that future research should examine how university training programs and formal education sources contribute to the persistence of such myths and identify necessary adjustments.

# Presentation language / Sunum Dili

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**Session Classification:** Session 1.5 (Day 1)