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Relationship between learning f low and academic performance among students: a systematic evaluation and meta-analysis

Abstract:

Introduction: The concept of "flow experience," characterized by a state of immersive enjoyment and profound engagement, pertains to individuals' deep involvement in intriguing and pleasant tasks. In the field of study, individuals are in a state of flow when encountering challenging tasks, which matters considerably in completing the tasks. Therefore, learning flow is considered a hotspot in education that may be related to improving academic performance. Nonetheless, there remains contention regarding the extent of learning flow's impact on academic performance. To this end, meta-learning was hereby used to provide evidenced on the relationship between them.

Methods: A systematic review was conducted under the guidance of PRISMA to examine the evidence of learning flow and academic performance, check the potential mechanism and evaluate the current evidence. Clinical research or empirical research on the influence of learning flow on academic achievement was collected by searching four databases. The literature retrieval spanned from each database's inception until June 2023, specifically covering the PubMed (2000–2023.6), Embase (1974–2023.6), Cochrane Library (1993–2023.6), and the Web of Science (1807 2023.6), with particular attention to the period between 2000 and 2023.

Results: Thirteen RCTs were included, the total sample size used in the study was 3,253. Using the NOS evaluation tool of queue study, the average evaluation score of the included literatures was 7.46, indicating that the overall literature was above average. Besides, the data software StataSE was used to test the heterogeneity of the data, and the correlation coefficient and 95% confidence interval effect were found to be 0.43 (0.28, 0.57).

Discussion: Our research indicates a link between learning flow and academic performance, that is, students with high learning flow levels tend to have better academic performance. At the same time, this conclusion needs to be verified by more high-quality literature and larger sample data.

Biography

Zhang Jinmin, is a dedicated researcher from Fujian, China, currently pursuing a Ph.D. in Education at the School of Education, Zhejiang Normal University. She earned her bachelor's degree in English from Fujian Normal University, followed by a master's degree from the College of Sports Science at the same institution. Her research interests lie at the intersection of physical education, education, and psychology, with a particular focus on exploring the interconnections among these fields.

Throughout her academic career, Zhang Jinmin has been recognized with nearly twenty awards, including the prestigious Second-Class Scholarship for Outstanding Students at Fujian Normal University. She has actively contributed to academia through participation in two national-level research projects and has authored several papers as the first author in esteemed journals such as Frontiers in Psychology.

Committed to the pursuit of scientific research, Zhang Jinmin remains eager to engage with the academic community and contribute to the advancement of knowledge in her areas of expertise.