# INPLASY

# Relationship between Learning Flow and Academic Performance: A Systematic Evaluation and Meta-analysis

**Corresponding author:**
Zhang Jinmin

763614676@qq.com

**Author Affiliation:**
Fujian Normal University.

Zhang, JM[1]; Fang, Q[2].

## ADMINISTRATIVE INFORMATION

## INTRODUCTION

**Review question / Objective** The purpose of this meta-analysis is to explore whether learning flow affect academic performance- the positive or negative impact of learning flow on academic performance. Furthermore, it does clarify main causes and make effective measures.

**Condition being studied** different media learning methods, enterprise online training, game-based online learning, non-face-to-face learning environment, computer science courses.

## METHODS

**Participant or population** Students, aged from 6 to over 60,coming from grade 1 of primary school to grade 4 of university.

**Intervention** Learning environment/courses/ methods to enhance flow experience.

**Comparator** Traditional environment/courses/ methods for regular learning.

**Study designs to be included** Clinical research/ Empirical research.

**Eligibility criteria** (1) the method to enhance the learning flow is the experimental group; (2) the control group that only conducts routine learning for students; (3) clinical research or empirical research; (4) the outcome indicators include at least one of the following: achievement test scores, flow questionnaire or interviews.

**Information sources** Four electronic databases (Pubmed, EMBASE, Cochrane Central Register of Controlled Trials and Web of Science).

**Main outcome(s)** Achievement test scores, flow questionnaire or interviews.

**Quality assessment / Risk of bias analysis** The quality evaluation scale is adapted from the quality

index (Downs&Black, 1998), the research article evaluation list (Durant, 1994) and the evaluation tool (Genaidy et al., 2007), with the total score of 9 points. The score of ≤ 6 points-low quality literature;7 ≤ the score ≤ 8-medium quality literature; the score ≥ 9-high-quality literature.

**Strategy of data synthesis** We test the heterogeneity through the correlation coefficient and its 95% confidence interval and choose the random effect model for statistical analysis. Then, we perform a publication bias test on the correlation coefficient and its 95% confidence interval and perform a sensitivity analysis of elimination one by one.

**Subgroup analysis** Data extraction tables were used to record the data in the study: first author, country, year of publication, sample size (number of totals, men and women), average age (mean and standard deviation), intervention details and NOS score.

**Sensitivity analysis** Sensitivity analysis is to eliminate studies one by one, combine the remaining studies and observe the changes in heterogeneity and effect size.

**Country(ies) involved** China.

**Keywords** Learning Flow; Academic Performance; Meta.

**Contributions of each author**
Author 1 - Zhang Jinmin.
Email: 763614676@qq.com
Author 2 - Fang Qi.