

# The Evolution, Framework and Frontier of Peer Instruction Research: Comparative Study of Chinese and Foreign Based on Knowledge Graph

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## Abstract

Peer instruction is a cooperative learning method that emphasizes active learning, peer support and timely feedback. Compared with traditional teaching methods, peer instruction reflects greater superiority in terms of improving achievement, learning attitudes and beliefs. However, there is a relative scarcity of penetrating, framing, and comparative literature on peer instruction research. By tracing and comparing the Chinese and foreign research progress of peer instruction, this study grasps the thematic vein and predicts the trends and hot issues of peer instruction, in order to further promote the implication and implementation. In this study, 2,771 related literatures were retrieved from WOS and CSSCI databases, and with the help of CiteSpace software, a visual analysis tool, keyword co-occurrence, high-frequency word time-zone division, hotspot burst identification and strategic diagram analysis were compared to analyze the research evolution, thematic frameworks and frontiers of peer instruction between China and foreign countries. It is found that, firstly, Chinese and foreign peer instruction research is not completely synchronized in time. Foreign research is earlier than domestic research in time and quantity, but both Chinese and foreign research entered the period of rapid development around 2014. Secondly, in terms of the research theme framework, foreign studies mainly include competence, technology, achievement, participation, students and others. Among them, the benefits to students, such as improving students' ability, confidence and academic performance, are hot research topics. By contrast, domestic studies are narrower in scope, mainly focusing on studies related to academic performance and learning motivation. Lastly, students' attitudes, motivation, needs, and perceptions of peer instruction, as well as the implementation model of peer instruction from teachers' perspectives are the frontier trends of common concern.

## Keywords

Peer Instruction, Knowledge Graph, Visualization, Comparative Study, CiteSpace