INPLASY

Effects of flipped classroom in university physical education: a systematic review

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ADMINISTRATIVE INFORMATION

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INTRODUCTION

Review question / Objective In recent years, with the development of educational informatization, flipped classroom has been gradually promoted and applied to various teaching fields. However, the systematic evaluation of the effect of flipped classroom in university physical education is still lacking. Therefore, the purpose of this study is to evaluate the effect of flipped classroom in university physical education. This review used PICOS (Population, Intervention, Control, Outcomes and study design) criteria as inclusion criteria.

Condition being studied The shortcomings of the current traditional physical education teaching mode include students' main body status is not prominent, teaching effect needs to be improved, teaching content does not match the needs of students and neglects the cultivation of students' comprehensive ability. At the same time, the development of educational technology, such as the popularization of the Internet, the application of multimedia devices and the rise of teaching platforms, provides technical support for flipped classroom. The transformation of physical education to quality education requires the cultivation of students' comprehensive quality and lifelong sports consciousness, and the flipped classroom model fits in with it. In addition, the independent learning ability of contemporary college students is enhanced and the learning time is fragmented, and the flipped classroom mode conforms to its learning characteristics, which promotes the research of flipped classroom in college physical education.

METHODS

Search strategy Database: Web of Science、Scopus、PubMed、EBSCOhost (SPORTDiscus). Key words: (" Physical fitness "or" health-related fitness "or" fitness elements "or" body composition "or" flexibility "or" muscle strength "or" muscle endurance "or" cardiorespiratory "or" speed "or" interest in learning "or" academic performance "or" learning attitude "or" learning motivation "or"

motor skills "or" physical education ") Or "Physical education courses" or "sports activities") AND (" University students "or" college students "or" undergraduates ").

Participant or population University students.

Intervention Flipped classroom teaching method.

Comparator The flipped classroom method was not used.

Study designs to be included RCT or/and CRCT.

Eligibility criteria Papers within ten years were included, and non-English language papers were excluded. And papers that the intervention was not flipped classroom and the subjects were not college students were not included in the study.

Information sources Web of Science、Scopus、PubMed、EBSCOhost（SPORTDiscus).

Main outcome(s) Most of the research focuses on college students majoring in physical education. The average undergraduate does relatively little research. The sports items studied in the literature include 110m hurdles, sports dance, sports theory, football, basketball, weightlifting and so on. Among them, there are more experimental researches on basketball teaching, and less researches on other projects. As for the dependent variables studied, academic achievement is the most studied in the literature, followed by self-cognition and learning motivation, and finally learning ability. However, the issue of physical fitness has not received sufficient attention in research.

Data management Use document Manager and excel spreadsheet to manage documents and extract data.

Quality assessment / Risk of bias analysis PEDro.

Strategy of data synthesis The two researchers then compared their search results, and in cases of disagreement regarding inclusion, the opinion of a third researcher was used to determine whether to include the study. In the second step, the full text of the included studies was read. The process of identifying, screening, and extracting data was also independently performed by the two researchers. Finally, the two researchers compared their screening and data extraction results. In the case of discrepancies in the data, the opinion of the third researcher was consulted to reach aconsensus.

Subgroup analysis Demographic variables, including gender, age, height, weight, and lung capacity.

Sensitivity analysis Exclude certain studies with a high risk of bias, or exclude certain data points to see if there is a significant change in the results of the study.

Language restriction Only in English.

Country(ies) involved China and Malaysia.

Keywords Flipped classroom； college physical education；teaching effect.

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