

INPLASY PROTOCOL

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None declared.

The potential of a novel teaching strategy: blended learning VS traditional teaching in nursing education - a systematic review and meta-analysis

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Review question / Objective: The main purpose of this analysis is to explore whether the effect of blended learning in nursing education is better than traditional teaching and to evaluate it from three aspects: knowledge, skill performance and learning satisfaction. In addition, through further analysis of the literature and results, the factors affecting the promotion of blended learning strategies and future research directions are explained from platform construction, implementation, teacher end, student end, etc.

Condition being studied: Blended learning VS traditional teaching in nursing education.

INPLASY registration number: This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 08 July 2021 and was last updated on 08 July 2021 (registration number INPLASY202170020).

INTRODUCTION

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aspects: knowledge, skill performance and learning satisfaction. In addition, through further analysis of the literature and results, the factors affecting the promotion of blended learning strategies and future research directions are explained from

platform construction, implementation, teacher end, student end, etc.

Condition being studied: Blended learning VS traditional teaching in nursing education.

METHODS

Participant or population: Nursing students.

Intervention: Blended learning strategy.

Comparator: Traditional teaching strategy.

Study designs to be included: RCTs and quasi-experimental studies.

Eligibility criteria: The eligibility criteria for inclusion were based on the PICOS (population, intervention, comparison, outcome, and study design) framework (Liberati et al. 2009): (1) the participants were nursing students or nurses; (2) the intervention in the experimental group was blended learning; (3) the intervention in the control group was the traditional learning (including traditional face-to-face learning, e-learning, and online learning); (4) the study included knowledge, skill performance, or learning satisfaction as an outcome; and (5) the study described a randomized controlled trial or a quasi-experimental study (QR).

Information sources: Sources - PubMed, Embase, Web of Science, CINAHL, and the Cochrane Library date: up to April 2021.

Main outcome(s): Knowledge, skill performance, and learning satisfaction.

Quality assessment / Risk of bias analysis: Two investigators independently appraised the potential risk of bias in the RCTs using the Cochrane Risk Assessment Tool for RCTs and used the MINORS (methodological items for non-randomized studies) to assess the quality of the quasi-experimental studies.

Strategy of data synthesis: Since there is currently no standardized and unified

evaluation system for blended learning strategies, we have selected three outcome indicators of knowledge, skills, and learning satisfaction to analyze the effects and influencing factors of blended learning as comprehensively as possible. the software package: Review Manager 5.2 and Stata 14.0 Since the measurement tools and methods of outcome indicators are not the same in these included studies, the continuous data were represented as STD mean difference(SMD). Statistical heterogeneity among the studies was tested using the I² statistic. If the results are highly heterogeneous, subgroup analyses and sensitivity analyses were performed to explore the sources of heterogeneity. Publication bias was assessed by Egger's test and Begg's test.

Subgroup analysis: Subgroup analysis is performed separately for each outcome indicator. Based on previous literature research, we will conduct subgroup analysis from the following key factors: country, study design, specific items of interventions in the experimental group, intervention duration, the pre-intervention training(Yes/No), availability of teaching tools(Easy/Difficult).

Sensitivity analysis: Sensitivity analysis is achieved by eliminating the studies one by one, merging the remaining studies, and observing the heterogeneity and effect size changes.

Country(ies) involved: China.

Keywords: blended learning; traditional learning; nursing education; knowledge; skill performance; learning satisfaction; systematic review; meta-analysis.

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