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The effect of microteaching on the teaching skills of students in the university: A Systematic Review

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ADMINISTRATIVE INFORMATION

Support - Universiti Putra Malaysia; Yancheng Teachers University.

Review Stage at time of this submission - Completed but not published.

Conflicts of interest - None declared.

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Amendments - This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 18 July 2023 and was last updated on 18 July 2023.

INTRODUCTION

Review question / Objective Implementing microteaching techniques or training has become a new and practical approach in teaching skill training. This study outlines the microteaching approach and assesses this teaching model's efficiency in the skill development process.

Condition being studied In the 1970s, a new trend of upgrading teacher education sparked the study of teaching skills. Traditional teacher preparation methods have been unable to satisfy the demands of the times as science and technology have advanced, and teacher education reform has deepened. As a result, teachers must educate using cutting-edge technology and scientific methodologies. Microteaching is an excellent way to prepare teachers to teach in the classroom. Microteaching is appropriate for pre-service teacher education, post-service research, and teaching research, which benefits teachers' professional development.

METHODS

Participant or population University students majoring in physical education.

Intervention Microteaching training.

Comparator Evaluation scale.

Study designs to be included Studies in this review met the following inclusion criteria: (a) the study had been published in an English or Chinese journal, describing the effects of microteaching on teaching skills, randomized controlled trial (RCT), non-randomized controlled trial (Non-RCT) with two or more groups, and single-group trials with pre-test and post-test; (b) the study covered interventions with microteaching, (c) the study explored the relationship between "microteaching" and "teaching skills," and (d) a full-text version was available in English and Chinese.

Eligibility criteria Students majoring in average education / pre-service teacher/teacher candidate.

Information sources SCOPUS, SPORT Discus (EBSCOhost), Science Direct, ProQuest, and CNKI.

Main outcome(s) The microteaching method is adopted to train the teaching skills of university students or pre-service teachers with a clear purpose, prominent focus, and ease to master and control, which is conducive to improving their teaching skills [9,10,13,15,19,20]. In all the included articles, microteaching has a particular impact on improving teaching skills. Still, in the experimental process, the types of teaching skills selected are different, and the degree of imaging on various teaching skills is also different.

Of the 11 articles, two focus on the psychological or ability effects of microteaching, such as teacher's accomplishment, self-efficacy, and performance [17,19]. 2 papers focus on the influence of microteaching on the Concept Mastery Routine and pedagogical content knowledge [11,18]. Seven articles focus on the effect of microteaching on teaching skills, but 1 has no subdivision of teaching skills in this article but an evaluation of comprehensive teaching skills [13]. Three articles only include one teaching skill [8,15]. Three articles compare some teaching skills [12,14,20] but only have some teaching skills in education or other subjects. From the analysis of measurement methods, there is no article using a microteaching evaluation scale, grade ratio statistical scale, and matrix calculation to grade teaching skills.

Quality assessment / Risk of bias analysis After data extraction, the PEDro improved scoring system was adopted. The 11 items included in the PEDro Modified scoring system (scale) (score range from 0 to 10 points) can evaluate the effect of microteaching intervention relatively accurately and reasonably.

The GRADE approach, which involves a four-point scale, was used to assess the quality of evidence. The evaluation criteria of study quality were high=9~10, moderate=6~8, low=4~5, and very low< 4.

Table 4 shows the risk of bias of the 11 selected articles according to the PEDro scale. Scores varied from six to seven and to eight. Regarding the quality of evidence, the GRADE guidelines have been followed. In general, all articles were of medium and high quality, among which 6 articles scored 8 points, 3 articles scored 7 points, and 2 articles scored 6 points. All papers were of medium and high quality, and no articles of low quality were found.

Strategy of data synthesis 1.Use PRISMA to select reviews;
2.Use PEDro Scale to analyse risk of bias.

Subgroup analysis No.

Sensitivity analysis No.

Language restriction English or Chinese.

Country(ies) involved China; Malaysia.

Keywords Microteaching; pre-service teacher; Students majoring in average education; teaching skills.

Contributions of each author

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