

INPLASY

Exploring the effects of professional development and learning experiences on in-service teachers' growth: a systematic review protocol

INPLASY2024100021

doi: 10.37766/inplasy2024.10.0021

Received: 5 October 2024

Published: 6 October 2024

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ADMINISTRATIVE INFORMATION

Support - This research has been funded by the Committee of Science of the Ministry of Science and Higher Education of the Republic of Kazakhstan (Grant No. BR21882260)».

Review Stage at time of this submission - Formal screening of search results against eligibility criteria.

Conflicts of interest - The authors declare that there is no conflict of interest associated with this research. All authors have contributed to the study and have no financial or personal relationships that could inappropriately influence or bias the work presented in this manuscript.

INPLASY registration number: INPLASY2024100021

Amendments - This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 6 October 2024 and was last updated on 6 October 2024.

INTRODUCTION

Review question / Objective This systematic review aims to explore in-service teachers' experiences of professional learning strategies (such as coaching, collaborative learning, and reflective practices) and formal professional development programs (such as one-off workshops and seminars) and their effects on teachers' self-perceived growth, specifically focusing on their self-perceived growth and effectiveness. The study's research question: How do in-service teachers' (P) experiences with professional learning (I) and professional development programs (C) impact their self-perceived teacher growth (O)?

Rationale This systematic literature review is about the professional development experiences of in-service teachers. The central phenomenon of

the study is the professional development and learning experiences of practising or in-service teachers. Before starting this systematic review, we searched and examined systematic reviews published in Scopus, Web of Science, and ERIC databases within 2018-2024. The rapid review of systematic reviews on professional learning and development of in-service teachers indicated that the professional development of in-service teachers has been widely examined focusing on its different dimensions. While all these systematic reviews focus on various dimensions of in-service teachers' professional learning there are limited systematic reviews specifically focusing on the quality of professional learning and professional development experiences impacting on self-perceived teacher growth or development. Furthermore, all these systematic reviews on the professional development of in-service teachers are conducted in English, and only a few studies

focus on developing middle and low-income countries. This systematic review aims to fill this gap and suggests its implications for non-Western contexts.

Condition being studied We examine the in-service teachers' experiences with professional learning and formal professional development intended to support their growth. Specifically, we focus on studies which describe, examine or explore professional learning and development experiences along with teachers' self-assessed or self-perceived growth in understanding and practice resulting from learning.

METHODS

Search strategy We use Web of Science, Scopus and ERIC databases to conduct this systematic review. The keywords for search are "professional development" OR "professional learning" AND "in-service teachers" OR "inservice teachers" AND "personal growth" OR "personal improvement" AND "professional growth" OR "teacher growth," which is used to search in Abstract, Title and Keywords (Scopus, ERIC), Keywords PLUS (Web of Science). The timeframe for the search is 2018-2024. Additional filters for search are journal articles, which exclude conference papers, dissertations, books and book chapters, and reports. Another filter for search in ERIC database is specifying the subject field to in-service teachers, primary or elementary teachers, middle school teachers and high school teachers. The filter for language is not applied.

Participant or population Participants or populations included in this systematic review are in-service teachers, which can be elementary, middle or high school teachers participating in professional development programs, sharing experiences of professional learning and sharing their self-perceived growth.

Intervention Intervention is professional learning strategies (e.g., coaching, collaborative learning, reflective practices).

Comparator Comparator is traditional professional development programs (e.g., one-off workshops, seminars).

Study designs to be included The study designs included in this systematic review are qualitative, quantitative, or mixed methods approaches. This review includes empirical peer-reviewed journal articles excluding conceptual and review studies, and also grey literature.

Eligibility criteria Empirical studies examining in-service teachers' experiences with professional learning and professional development programs, as well as their self-perceived growth as teachers, are included. The study includes only studies that focus on in-service teachers' experiences of professional learning and/or professional development training and their self-perceived teacher growth. Additionally, participants in these empirical studies must be exclusively in-service teachers. It includes subject teachers such as STEM, humanities, language, arts, and social science teachers working as in-service teachers but excludes pre-service teachers preschool teachers, and vocational and higher education teachers.

The review specifically emphasizes the professional learning experiences and participation in development training and programs for in-service teachers. It does not consider empirical studies that do not centre on these experiences as their primary focus. Additionally, it excludes research that addresses subject-specific professional learning, training needs, teachers' literacy or knowledge, gender differences, religious studies, issues of race and racism, equity, or skill perspectives. Furthermore, it does not include empirical studies that evaluate the effectiveness of professional learning and development programs based on student achievement or observations conducted by individuals other than in-service teachers.

Information sources The primary sources of this systematic review are Web of Science, Scopus and ERIC databases. It includes only empirical peer-reviewed journal articles excluding conceptual and review studies and grey literature. Additionally, we use Google Scholar and citation searchers of identified and relevant articles.

Main outcome(s) The outcome measured in this study is self-perceived teacher growth or development. It is measured following Clarke and Hollingworth's interconnected framework on teacher's growth, which combines teacher practices, meanings or understandings, and the environment or context in which they operate (1). The findings of this systematic review are expected to have several implications. The review is expected to underscore the scarcity of systematic reviews specifically focused on the quality of professional learning experiences and their impact on self-perceived teacher growth. This gap could highlight the need for future research to focus more comprehensively on qualitative aspects of professional development. The review will likely highlight specific strategies that contribute

significantly to self-perceived growth among in-service teachers, such as coaching, collaborative learning, and reflective practices. It will provide insights into how these strategies enhance teachers' understanding of their effectiveness and growth.

Data management All data are stored in the Zotero group library, providing access to all authors. All retrieved data are uploaded to Covidence, a web-based software platform designed to streamline the systematic review process. Covidence facilitates importing references, screening titles and abstracts, conducting full-text reviews, extracting data, calculating inter-rater reliability, and analyzing results. Two researchers act as reviewers in Covidence, and any disagreements are discussed collectively by the entire research team.

Quality assessment / Risk of bias analysis To minimize bias in this systematic review, a team of four researchers adheres rigorously to a predetermined protocol. The research questions are formulated using the PICO framework (Population, Intervention, Comparator, Outcome), which provides a structured approach to defining the critical components of the review. Furthermore, the team follows the recommendations outlined in the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) framework. In addition to these methodologies, the use of Covidence further supports the systematic review process by providing an organized platform for conducting each stage of the review. All disagreements about the inclusion and exclusion of studies, and their analysis are addressed by a group discussion.

Strategy of data synthesis The studies selected for review and analysis will be examined using a narrative approach. Initially, we will conduct a descriptive analysis to compare professional learning and professional development experiences. Summary tables will be utilized to present key information, including research design, types of interventions, research tools, and study outcomes. Subsequently, we will implement a thematic analysis of the included studies, coding them using the teacher growth framework (1, 2).

Subgroup analysis Not applicable to this study.

Sensitivity analysis Not applicable to this study.

Language restriction Search done in English but studies in Kazakh and Russian languages that appeared in the search are included.

Country(ies) involved Kazakhstan.

References

1. Clarke D, Hollingsworth H. Elaborating a model of teacher professional growth. *Teaching and Teacher Education*. 2002 Nov;18(8):947–67.
2. *Systematic reviews: CRD's guidance for undertaking reviews in health care*. 3rd ed. New York, NY, USA: Centre for Reviews and Dissemination; 2009.

Keywords teacher professional learning; teacher professional development; teacher growth; systematic review; in-service teachers; learning experiences.

Dissemination plans This systematic review is planned to be published in a peer-reviewed academic journal. The results will also be presented to the university faculty and disseminated and shared with Kazakhstani scholars in the field of teacher education. This review will also contribute to developing and designing professional learning for in-service teachers in the form of university and school, researcher and teacher collaboration. Furthermore, the process of systematic review will be shared with faculty and Kazakhstani scholars during the professional development programs designed for faculty members.

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