

INPLASY

Shaping Future-Ready Graduates: A Systematic Review of Academic Management's Role in Meta-skills Development in Sichuan Higher Education Institutions

INPLASY2024100077

doi: 10.37766/inplasy2024.10.0077

Received: 17 October 2024

Published: 17 October 2024

Che, C; Chaemchoy, S; Siribanpitak, P.

Corresponding author:

Chi Che

chi.che@foxmail.com

Author Affiliation:

Chulalongkorn University.

ADMINISTRATIVE INFORMATION

Support - Faculty of Education.

Review Stage at time of this submission - Data extraction.

Conflicts of interest - None declared.

INPLASY registration number: INPLASY2024100077

Amendments - This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 17 October 2024 and was last updated on 17 October 2024.

INTRODUCTION

Review question / Objective This meta-analysis aims to explore the correlation between academic management practices (e.g., curriculum design, teaching strategies, and evaluation mechanisms) and meta-skills development (Adaptive Expertise, Creative Agility, Relational Dynamics, Strategic Synthesis) within Higher Education Institutions (HEIs), with a focus on private HEIs in Sichuan Province, China.

The research addresses the following questions:

- (1) How does academic management influence meta-skills development in private HEIs in Sichuan?
- (2) Which academic management components, such as curriculum design, teaching and learning strategies, and evaluation practices, most significantly enhance meta-skills development in students?

The specific objectives of this research are:

To explore how academic management practices are related to the development of meta-skills such

as Adaptive Expertise, Relational Dynamics, Creative Agility, and Strategic Synthesis in HEIs.

To collect evidence on how curriculum design, teaching methods, and evaluation systems contribute to meta-skills development.

To propose practical strategies for academic managers to enhance meta-skills development through innovative practices in HEIs in Sichuan.

Rationale The rationale for this study is to investigate how structured academic management frameworks in HEIs influence the development of critical meta-skills necessary for students' adaptability, creativity, and relational dynamics. As higher education aligns more with industry and global skill demands, this study provides a systematic review of existing research to develop a comprehensive framework that enhances meta-skills development.

Condition being studied This study focuses on the relationship between academic management practices and the development of key meta-skills,

including adaptive expertise, relational dynamics, creative agility, and strategic synthesis, in the context of Sichuan HEIs.

METHODS

Search strategy Databases searched: SCOPUS, ERIC, Google Scholar, Web of Science

Search terms used: "academic management", "meta-skills", "Higher Education Institutions", "curriculum design", "teaching strategies", "evaluation mechanisms", and "Sichuan". Searches were restricted to peer-reviewed, English-language studies published between 2012 and 2024.

Participant or population Participants include students, faculty, and administrators within Higher Education Institutions, particularly private HEIs in Sichuan Province, China, where the development of meta-skills is a critical focus of academic management.

Intervention Academic management practices such as curriculum design, teaching strategies, and evaluation mechanisms aimed at developing meta-skills.

Comparator No direct comparator; studies with varying academic management strategies were included.

Study designs to be included Quantitative, qualitative, and mixed-method studies that evaluate the impact of academic management practices on meta-skills development in HEIs.

Eligibility criteria The inclusion criteria for this systematic review were designed to ensure a high-quality analysis of relevant studies. Only peer-reviewed, full-text articles published in English were considered, with a focus on research related to academic management and meta-skills development within Higher Education Institutions (HEIs), specifically in Sichuan Province. Studies needed to address key academic management practices such as curriculum design, teaching strategies, and evaluation mechanisms, and their impact on meta-skills development, including Adaptive Expertise, Relational Dynamics, Creative Agility, and Strategic Synthesis. Furthermore, articles indexed in reputable databases like SCOPUS and Web of Science were prioritized to ensure accurate and reliable data. The review also included quantitative, qualitative, and mixed-method studies published between 2012 and 2024, providing a comprehensive overview of the topic.

The exclusion criteria helped refine the selection by removing studies that did not meet the review's focus or methodological standards. Studies that were not directly related to academic management or meta-skills development within HEIs, or those conducted outside the context of higher education, were excluded. Additionally, non-English publications, studies with low methodological quality, or articles addressing unrelated topics, such as general education management or skills development unrelated to meta-skills, were also excluded. Duplicate publications and articles from low-indexed or non-peer-reviewed sources were omitted to maintain the review's rigor and relevance. This process ensured that only the most pertinent and high-quality studies were analyzed in the review.

Information sources SCOPUS, ERIC, Google Scholar, Web of Science were used to identify studies. Manual searches of reference lists were also conducted for additional relevant studies.

Main outcome(s) Primary outcome: The correlation between academic management practices and the development of meta-skills (measured using effect sizes).

Additional outcome(s) Secondary outcomes: Analysis of individual meta-skills (e.g., critical thinking, creativity, communication) and their development based on specific academic management practices.

Data management Data is being managed using Zotero for references, and a Microsoft Excel sheet for tracking extracted data such as effect sizes, sample sizes, and confidence intervals.

Quality assessment / Risk of bias analysis A comprehensive synthesis of the findings will be meticulously conducted to ensure the trustworthiness of the review. The results will be presented in a transparent, systematic, and replicable format, fully aligned with PRISMA 2020 guidelines. This approach will provide a clear and thorough overview of the current state of research on academic management and meta-skills development within the context of Higher Education Institutions (HEIs). In line with the commitment to rigor and clarity, the study will utilize the Delphi Method with expert panels to assess bias and evaluate the certainty of the evidence collected.

The process will begin with the selection of an expert panel from the academic sector, chosen for their expertise in academic management and meta-skills. The experts will independently

evaluate the studies using a predefined checklist for reliability, transparency, and methodological quality. The evaluations will focus on how effectively the studies demonstrate correlations between academic management practices and the development of key meta-skills. The final assessments will be synthesized into a unified summary, ensuring a comprehensive understanding of the certainty and validity of the studies' findings. Any disagreements among the experts will be resolved through consensus-building to guarantee the reliability of the conclusions drawn. The JBI Critical Appraisal Tool and the NIH Quality Assessment Tool will be used to assess the quality of studies included in the meta-analysis. Risk of bias will be evaluated by two independent reviewers, with discrepancies resolved through discussion.

Strategy of data synthesis A random-effects model will be used to synthesize data. Forest plots and funnel plots will be created to assess the overall effect size and publication bias. Sensitivity analyses will be conducted based on study quality and heterogeneity.

Subgroup analysis Subgroup analyses will be performed based on different meta-skills (e.g., Adaptive Expertise, Relational Dynamics) and types of academic management practices (e.g., curriculum vs. evaluation).

Sensitivity analysis Sensitivity analysis will be conducted by removing low-quality studies to assess the robustness of the findings.

Language restriction English only.

Country(ies) involved China, Thailand.

Other relevant information This study contributes to developing a comprehensive conceptual framework for improving meta-skills in HEIs, particularly in the Sichuan context

Keywords academic management; meta-skills; Higher Education Institutions; curriculum design; Sichuan.

Dissemination plans The findings of this review will be disseminated through publication in peer-reviewed journals, conference presentations, and academic workshops.

Contributions of each author

Author 1 - Chi Che - The creation of the protocol was led by Chi Che, who was responsible for the overall preparation of the research plan. Chi Che

undertook the tasks of protocol drafting, database investigation, analysis of meta-skills frameworks, and writing the manuscript. He was also responsible for coordinating the research team.

Email: chi.che@foxmail.com

Author 2 - Sukanya Chaemchoy - Sukanya Chaemchoy contributed to the conceptualization of the research design and the methodological framework. She supported the analysis of academic management practices in the context of Higher Education Institutions (HEIs) and was instrumental in refining the research questions and search strategy.

Email: sukanya.nu@gmail.com

Author 3 - Pruet Siribanpitak - Pruet Siribanpitak provided expertise in the systematic review methodology and supported the meta-analysis. He was involved in the quality assessment process, ensuring the adherence to PRISMA guidelines, and helped with data extraction and analysis.

Email: pruet.s@chula.ac.th