INPLASY

Barriers and Facilitators for the Implementation of Educational Innovations in Higher Education: A Scoping Review

INPLASY2025110034
doi: 10.37766/inplasy2025.11.0034
Received: 12 November 2025
Published: 12 November 2025

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ADMINISTRATIVE INFORMATION

Support - Fondecyt Iniciacion 11230442.

Review Stage at time of this submission - Preliminary searches.

Conflicts of interest - None declared.

INPLASY registration number: INPLASY2025110034

Amendments - This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 12 November 2025 and was last updated on 12 November 2025.

INTRODUCTION

Review question / Objective The review question is: What are the barriers and facilitators for the implementation of educational innovations in higher education across its different dimensions? The objective is to comprehensively synthesize the available literature to identify and compare barriers and facilitators for the implementation of educational innovations in higher education across various dimensions of innovation (assessment methods, content delivery and access, course design and structure, curriculum design, faculty development, instructional strategies/pedagogical approaches, teaching support, and learning activities).

Background In recent decades, the higher education system has undergone a rapid process of massification worldwide, resulting in a diverse and heterogeneous student population (Alonso-Sáez et al., 2019). According to the latest Higher Education Figures at a Glance report (UNESCO, 2025), higher education enrollment has more than doubled in the past 20 years—from 100 million students in 2000 to 246 million in 2023.

The United Nations, through Sustainable Development Goal 4 on Quality Education, established as a target that by 2030 all men and women should have equal access to quality technical, vocational, and higher education, including university education (ODS, 2015).

However, the increase in enrollment has not necessarily been accompanied by equivalent improvements in educational outcomes, as reflected in the long completion times observed in Latin American and other global contexts. The Education at a Glance report from the OECD (2025) indicates that only 13% of higher-education students complete their studies within the

theoretical time frame, far below the OECD average of 43%. This rate increases to 60% when extending the timeframe by three additional years, similar to Austria (60%), Luxembourg (62%), and Italy (56%), but still below the OECD average of 70%.

In Chile, the Ministry of Education has reported dropout rates of 24.1% and 33.9% in the first year for university and technical-professional programs, respectively. Among these, approximately 33.4% of university students and 64.4% of technical students never re-enroll in higher education, resulting in definitive dropout (SIES, 2019). The literature has reported various factors that explain dropout in higher education; for this particular review, we will focus on those with an academic origin.

These indicators are particularly relevant, as prolonged trajectories or non-completion generate economic and social costs for individuals and society. High dropout or delay rates may reflect structural problems such as misalignments between academic offerings and student needs, insufficient preparation, or weaknesses in support systems (Mineduc, 2025).

In response to these challenges, educational innovation has emerged as a key strategy to enhance the quality and equity of student learning trajectories in higher education, adapting to an increasingly diverse and heterogeneous student population (Alonso-Sáez et al., 2019).

Rationale In the university context, several perspectives can be used to analyze and understand educational innovation.

Palmer & Giering (2024) define educational innovation as the creation or adaptation of teaching practices aimed at promoting meaningful learning, student engagement, and retention.

Bates (2019) emphasizes innovation in higher education focused on integrating technology into teaching and learning processes, which requires rethinking education in light of the needs of a knowledge-based society.

Trowler (2020), meanwhile, focuses on the assumptions, values, practices, and power relations within the academic context—his concept of Teaching and Learning Regimes (TLRs)—where educational innovation is understood as a reconfiguration of existing regimes that often involves tensions between innovation and tradition, between institutional control and academic autonomy.

Several studies have explored barriers and facilitators for implementing educational innovations in higher education across different dimensions. For innovations related to content delivery and access, a systematic review on the adoption of blended learning (Bokolo et al., 2020) identified success factors across three domains: student factors (support, attitudes, perspectives, and learning effectiveness), faculty factors (satisfaction, course management, ease of use, and teaching efficacy), and administrative factors (institutional support, resources, management, ethics, and overall effectiveness).

In innovations related to assessment methods, the systematic review by Heil & Ifenthaler (2023) found that success factors for implementing online assessments include instructional support, predefined and transparent grading criteria, clear guidelines, explanation of assessment purposes, and alignment between assessment design and learning objectives.

While there is updated scientific evidence on specific strategies such as blended learning and online assessment, there is a lack of an integrative synthesis that identifies, compares, and explains barriers and facilitators across the broader spectrum of educational innovation dimensions—assessment, content delivery, course and curriculum design, faculty development, instructional strategies, teaching support, and learning activities.

This gap is particularly critical in the current context of massification and high dropout rates, which demand a deeper understanding of how higher-education institutions design, manage, and implement innovations within their unique organizational and cultural settings.

Such a review would not only map the state of knowledge but also generate comparative frameworks to inform future research and guide institutional and regional policy decisions.

Practically, examining barriers and facilitators of educational innovation in higher education will provide a solid foundation for designing effective interventions. By accurately understanding the factors that positively or negatively influence innovation implementation, university leaders, faculty, and educational professionals will be better equipped to plan and execute improvement initiatives in teaching and learning with higher relevance and likelihood of success. This will strengthen evidence-based decision-making and help identify research gaps requiring further study.

This study will be conducted as a scoping review, as it aims to broadly and systematically map existing evidence rather than assess the effectiveness of specific interventions. According to the guidelines proposed by Arksey and O'Malley (2005) and the subsequent updates by Levac et al. (2010) and the Joanna Briggs Institute (Peters et al., 2020), the scoping review approach allows for the identification of knowledge gaps, clarification of concepts, and analysis of the extent, range, and

nature of the available evidence, which aligns fully with the objectives of this study.

METHODS

Strategy of data synthesis The scoping review will follow the PRISMA-ScR guidelines (Tricco et al., 2018). Systematic searches will be conducted in ERIC, EBSCOhost, ScienceDirect, Scopus, Web of Science, and SciELO.
Search syntax will be restricted to title, abstract, and keywords:
• ERIC: (barriers OR drivers) AND (“educational innovation” OR "teaching innovations” OR “learning innovations”) AND ("Assessment Method" OR "Content Delivery" OR "Course Structure" OR "Course design" OR "Curricular Design" OR "Instructional Development" OR "Instructional Strategy" OR "Instructional Support" OR "Learning Activity") AND (“higher education” OR University OR College).
• ScienceDirect: (barriers OR drivers) AND “educational innovation” AND ("Assessment Method" OR "Content Delivery" OR "Curricular Design" OR "Instructional Development" OR "Learning Activity") AND “higher education”.
• EBSCOhost: (barriers OR drivers OR enablers OR "implementation factors") AND (“educational innovation” OR "teaching innovations” OR “learning innovations”) AND ("Assessment Method" OR "Content Delivery" OR "Course Structure" OR "Course design" OR "Curricular Design" OR "Instructional Development" OR "Instructional Strategy" OR "Instructional Support" OR "Learning Activity") AND (“higher education” OR University OR College).
• Scopus & Web of Science: (barriers OR drivers OR enablers OR "implementation factors") AND (“educational innov*” OR "teach* innov*" OR “learn* innov*”) AND (“higher education”OR University OR College).
• Scielo: ("innovación educativa" OR "educational innovation") AND ("educación superior" OR "higher education" OR Universidad OR University) AND (barreras OR facilitadores OR obstaculos OR barriers OR drivers OR enablers OR obstacles).
The search will include peer-reviewed studies published in English or Spanish up to November 2025, without year restrictions, to capture the evolution of educational innovation. Grey literature will be excluded.

Eligibility criteria All articles retrieved through the search will be screened, and only those meeting the following inclusion criteria will be selected:
• Population: university students, faculty members, mid-level academic leaders, and higher-education authorities.
• Intervention/Exposure: studies analyzing the implementation of educational innovation strategies at the macro (institutional), meso (faculty, department, or program), or micro (individual teacher) level within the following dimensions: assessment, content delivery, curriculum design, faculty development, pedagogical approaches, teaching support, and learning activities, where, in addition, the barriers or facilitators associated with the implementation of educational innovation are made explicit.
• Outcomes: reported barriers and facilitators related to the implementation of educational innovation strategies in higher education emerging from institutional or programmatic contexts.
• Study Design: instrumental research, empirical studies (experimental, quasi-experimental, single-case, non-experimental, qualitative, or mixed-methods), or methodological research.
Exclusion criteria:
• Studies that do not address barriers and facilitators of educational innovation implementation.
• Innovations stemming from the isolated interests of individual instructors.
• Conference abstracts, posters, dissertations, theses, commentaries, study protocols, non-scientific journals, or systematic/literature reviews.
• Articles written in languages other than English or Spanish.

Source of evidence screening and selection The evidence-selection process will be carried out in three successive stages using the Rayyan platform:
• Duplicate removal: records retrieved from databases will be imported into Rayyan, where duplicates will be automatically and manually removed.
• Title and abstract screening: two independent reviewers will screen studies according to the inclusion/exclusion criteria. Conflicts will be resolved by a third reviewer (arbiter).
• Full-text review: pre-selected articles will be read in full to confirm eligibility. Reasons for exclusion will be recorded and presented in a PRISMA-ScR flow diagram.
• Inter-reviewer agreement will be assessed using Cohen’s Kappa coefficient to ensure reliability.

Data management All bibliographic information will be managed through Rayyan, and data extraction will be conducted using a validated Microsoft Excel spreadsheet including:
• Full reference (APA 7 format).
• Country.
• Population.
• Implementation level.

• Dimension of innovation (assessment, curriculum design, teaching, etc.).
• Type of institution.
• Identified barriers.
• Identified facilitators.
• Innovation outcomes.
• Use of technology.
• Analytical observations or comments.

Reporting results / Analysis of the evidence Data will be analyzed through thematic and categorical synthesis. Barriers and facilitators will be grouped according to implementation levels (micro, meso, macro) and the innovation dimensions described in Palmer & Giering's taxonomy (2025). In addition, the theoretical frameworks on innovation and educational change proposed by Bates (2019), Trowler (2020), and Rogers (2003) will be considered, allowing the findings to be interpreted not only in terms of observable factors but also through the institutional, cultural, and symbolic dynamics that mediate change.
An inductive-deductive content analysis will be employed, combining theoretical categories with emergent subcategories. Results will be presented through frequency tables and conceptual maps highlighting patterns, relationships, and research gaps.
Methodological quality of studies will be assessed following scoping review recommendations.
Theoretical saturation will be considered achieved when no new relevant conceptual categories emerge or findings become redundant. An analytic decision log will ensure transparency and traceability.
Quality assessment of included studies: Two investigators independently assessed the methodological quality of the included studies using The Quality Assessment Tool for Observational Cohort and Cross-Sectional Studies, the Quality Assessment Tool for Before-After (Pre-Post) Studies with No Control Group, and The Quality Assessment of Controlled Intervention Studies (Aromataris, E., & Munn, Z., 2020).

Presentation of the results
Findings will be organized in three levels:
• General characterization of studies: descriptive table showing year, country, innovation type, implementation level, and methodological approach.
• Synthesis of barriers and facilitators: comparative matrix crossing innovation types with analytical levels.
• Visual representation:
o PRISMA-ScR flow diagram of study selection.
o Evidence map (bubble or network chart) showing study concentration by innovation dimension and institutional level.
o Integrative model summarizing key facilitators and barriers in the implementation of educational innovations in higher education.
The final report will follow PRISMA-ScR (Tricco et al., 2018) guidelines and include tables and figures designed using visualization software such as Power BI or Excel.

Language restriction English and Spanish.

Country(ies) involved Chile.

Keywords Educational Innovation; Higher education; Barriers; Drivers.

Dissemination plans The review results will be disseminated through:
• Publication of the full article in a peer-reviewed journal focused on higher education or educational innovation.
• Presentation at national and international conferences.
• Communication through national media outlets.

Contributions of each author
Author 1 - Cristian Pincheira Martínez - Conceptualization and study design (objectives, research questions, and inclusion/exclusion criteria); search and selection of studies; first reviewer; analysis and synthesis of results; drafting and revision of the final manuscript.
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Author 2 - Rafael Zapata Lamana - Conceptualization and study design (objectives, research questions, and inclusion/exclusion criteria); search and selection of studies; third reviewer (arbiter); analysis and synthesis of results; drafting and revision of the final manuscript.
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