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SYSTEMATIC REVIEW

Quality Assurance Models in Higher Education: A Systematic Review of International Approaches, Standards, and Practices

Modelos de garantía de calidad en la educación superior: una revisión sistemática de los enfoques, normas y prácticas internacionales

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ABSTRACT

Introduction: quality assurance in education has become a central pillar in the current global context, marked by growing competitiveness and high expectations in the labor market.
Objective: the purpose of this research is to analyze the main models of educational quality assurance, exploring their implementation in various geographical contexts in order to promote higher educational standards.
Method: a systematic review was conducted following PRISMA 2020, using the Scopus and Web of Science databases. Studies on educational quality, assurance models, accreditation standards, and best practices in universities published in English or Spanish were selected. A total of 67 documents were retrieved, and after screening and applying exclusion criteria, 17 were included in the study. Exclusion was carried out in three phases: poorly indexed studies, studies without full access, and those irrelevant to the central topic.
Results: the analysis of 17 studies shows marked geographical diversity, focusing primarily on Indonesia and Bulgaria (three studies each). ESG standards and ISO 9001:2015 are the most widely used. Self-assessment is the predominant assessment method (four studies), followed by interviews and observation.
Conclusion: the study highlights the importance of adapting assurance approaches to local specificities, recognizing geographical and methodological diversity as key factors. This paper invites reflection on current assurance models, advocating for flexible and adaptive approaches that foster continuous and sustainable improvement in educational quality.

Keywords: Quality Assurance; Higher Education; Accreditation; PRISM Method.

RESUMEN

Introducción: el aseguramiento de la calidad en la educación se ha convertido en un eje central en el contexto global actual, marcado por la creciente competitividad y las altas expectativas del mercado laboral.
Objetivo: esta investigación tiene como propósito analizar los principales modelos de aseguramiento de la calidad educativa, explorando su implementación en diversos contextos geográficos con el fin de promover estándares educativos más elevados.
Método: se realizó una revisión sistemática siguiendo PRISMA 2020, utilizando las bases de datos de Scopus y Web of Science. Se seleccionaron estudios sobre calidad educativa, modelos de aseguramiento, estándares de acreditación y buenas prácticas en universidades, publicados en inglés o español. En total de descargaron

67 documentos y luego de la revisión y exclusión se obtuvieron un total de 17 válidos para el estudio. La exclusión se realizó en tres fases: estudios mal indexados, no accesibles o irrelevantes para el tema central. **Resultados:** el análisis de 17 estudios muestra una marcada diversidad geográfica, concentrándose principalmente en Indonesia y Bulgaria (3 estudios cada uno). Los estándares ESG y la norma ISO 9001:2015 son los más utilizados. La autoevaluación es el método de evaluación predominante (4 estudios), seguida de entrevistas y observación.
Conclusión: el estudio destaca la importancia de adaptar los enfoques de aseguramiento a las particularidades locales, reconociendo la diversidad geográfica y metodológica como factores clave. Este trabajo invita a reflexionar sobre los modelos actuales de aseguramiento, abogando por enfoques flexibles y adaptativos que fomenten una mejora continua y sostenible en la calidad educativa.

Palabras clave: Aseguramiento de la Calidad; Educación Superior; Acreditación; Método PRISMA.

INTRODUCTION

Quality assurance in education is a complex network of processes, policies, and practices implemented by educational institutions and regulatory bodies to ensure excellence in teaching, research, and educational management. In a world characterized by the globalization of knowledge and intense competition among institutions, this endeavor transcends the technical dimension, it becomes an act of public trust and a continuous renewal of the educational promise.[1,2]

Beyond numbers and metrics, this approach seeks to transform institutions into centers for the cultivation of critical minds, capable of facing the challenges of a constantly changing environment. It enables the identification of weaknesses, fosters innovation, and positions them as benchmarks of excellence both locally and globally.[3] Consequently, quality assurance stands as a fundamental pillar for building more equitable, efficient, and competitive educational systems, attracting the attention of education theorists and practitioners alike.[4]

Nevertheless, these ideals face significant challenges. The disarticulation of knowledge and the absence of a coherent and universal vision for quality assurance limit the potential of existing policies and practices. The widespread adoption of international models, often decontextualized, has created a fragmented landscape in which some institutions excel at meeting quality standards, whereas others struggle to integrate these expectations into their local realities.[5,6] This gap, compounded by the lack of robust evidence to guide decision-making, perpetuates inequalities in educational quality globally.[7]

In this context, this research aims to map the main quality assurance models across diverse settings, exploring their implementation and adaptability. Its objective is to identify the predominant models, the essential standards across different regions, and the roles of key actors, as well as to shed light on the practices and challenges that shape this field. This intellectual endeavor seeks not only to enhance understanding but also to provide clarity and propose solutions to strengthen educational standards globally.

METHOD

The study used PRISMA 2020 to conduct a systematic and rigorous literature review, ensuring comprehensiveness and minimizing bias in the analysis of educational quality in higher education.[8] Based on these criteria, studies on educational quality, assurance models, accreditation standards, and best practices in universities published in English or Spanish were selected. The exclusion process was carried out in three phases, eliminating studies with low indexing levels, inaccessibility, or irrelevance to the main topic.

The information search was conducted in January 2025 in the Scopus and Web of Science databases, selected for their recognition and coverage in social sciences and higher education. Web of Science is recognized for its rigor and selectivity in high-impact research.[9] Search strategies were formulated according to the specific syntax of each platform, using the main terms “Quality Assurance,” “Higher Education,” “University,” and “Model.”

In this sense, the search strategy consisted of designing specific equations for both databases, adapted to their syntax, to identify relevant studies on quality assurance in higher education. In Scopus, the equation used was: *TITLE (“Quality assurance”) AND TITLE (“higher education” OR “university”) AND TITLE (model). For Web of Science, the equation was adapted to the platform’s syntax, resulting in: *TI=(“Quality assurance”) AND TI=(“higher education” OR “university”) AND TI=(model).

A total of 67 documents were collected using these search commands: 47 in Scopus and 20 in WoS. The selection criteria were defined using the PICOS framework. Theoretical and empirical research conducted at universities, whether qualitative, quantitative, or mixed methods, was included. Only studies published in peer-reviewed journals between 2014 and 2024 and written in English or Spanish were considered. Papers

without full-text access, poorly indexed studies, and those not relevant to the central thematic focus were excluded, resulting in a total of 17 studies included in the review. Due to the descriptive and conceptual approach of the literature analyzed, no specific comparator group was established, focusing the review on the phenomenon of interest.

The critical appraisal of the methodological quality of the included studies was carried out based on the criteria of the Critical Appraisal Skills Programme (CASP) instrument, adapting its application to the context of the study. This procedure allowed for the assessment of the objectives, methods used, results, and their consistency with the conclusions, ensuring that they met quality standards. Discrepancies in the assessment of risk of bias were resolved by consensus among the authors.

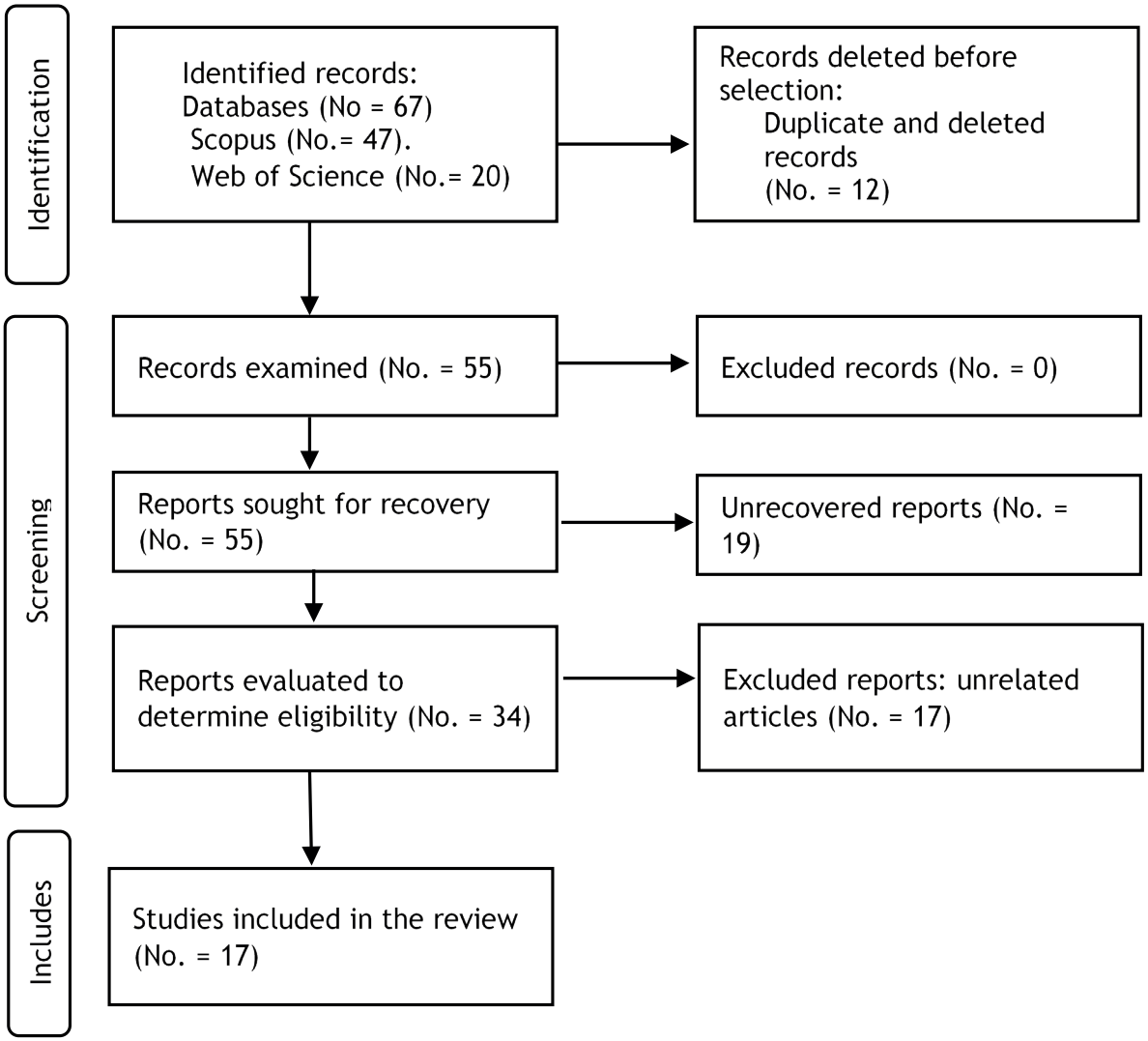

Figure 1. PRISMA flowchart, 2020

RESULTS

It examines assurance models across different geographical contexts, the key standards for university accreditation, and the methods used to evaluate the assess of these processes.

The 17 studies analyzed show a clear trend toward the development and improvement of quality assurance models in higher education. They place a strong emphasis on two areas: (a) the integration of international standards and (b) the optimization and improvement of institutional processes. Several studies propose articulated frameworks that connect different models and methodologies, strengthening institutional management while ensuring educational quality.

The studies also identify a growing incorporation of technological and information platforms that facilitate the digitalization of processes, reduce errors, and support informed decision-making.

Other studies highlight the need to adapt assessment models to specific contexts by defining indicators, validating them with experts, and ensuring their consistency with learning objectives.

Table 1. Studies included in the research

Articles analyzed	Objectives	Results
A unified model of quality assurance system for iso-certified higher education institutions [10]	Develop a unified Quality Assurance System model for ISO-certified higher education institutions.	A unified model was achieved that integrates both systems under the logic of the PDCA cycle.
Development of Internal Quality Assurance Model in Higher Education Institution [11]	The purpose of this article is to provide an Internal Quality Assurance Model in the Higher Education of Teacher Training and Education Singkawang	The study identifies 30 internal quality standards at STKIP Singkawang and develops the DIECU model, a continuous cycle (Decide, Implement, Evaluate, Verify, Improve) designed to strengthen management and ensure sustainable educational quality.
Enhancement of the Quality Assurance Model at the Slovak University: Case Study [12]	The study aims to present an improved model for internal university quality assurance based on ISO 9001:2015, ESG, and accreditation criteria.	The results demonstrate the viability of the model and improvements in educational management through web support. Its implementation can optimize processes, integrate databases, and strengthen the efficiency of the quality system.
Quality Indicators and Models for Online Learning Quality Assurance in Higher Education [13]	Review the quality of online learning in higher education, identifying indicators and models to ensure it.	Teacher–student interaction, student support, timely feedback, and the planned use of technologies are key to ensuring quality.
Addressing the tensions in a process-based quality assurance model through the introduction of graduate outcomes: A case study of the change process in a vocational higher education institution in the United Arab Emirates [9]	Resolving tensions in a process-based quality assurance model by incorporating graduation outcomes at a higher education institution in the UAE	Measuring student performance enhances curriculum development, increases teacher engagement, and promotes deeper institutional debate on educational quality.
Comparison of Indian quality assurance model and accreditation parameters of higher education with international standards [14]	To compare quality assurance models and accreditation parameters in Indian higher education with international standards and propose a globally aligned quality framework.	They show differences in teaching skills, educational management, resources, and assessment, as well as gaps between the learning outcomes required in India and abroad.
Developing Model of Quality Assurance for Higher Education Institutes [15]	Develop an integrated quality assurance model for higher education institutions by unifying ISO 9001:2015, SPMI, SPME, SPIP, and SAKIP.	The results identify similarities, strengths, and limitations among the current systems and show a lack of synchronization between internal and external audits.
Educational quality assurance in universities: An enhanced model [7]	Propose an improved model for ensuring educational quality in universities based on the integration of key elements of the academic environment.	A systemic approach is proposed, focused on the continuous improvement of student learning, which articulates leadership, evaluation, teacher development, and support structures.
Improving of the decision-making model in the processes of external quality assurance of higher education [16]	Develop a decision model to improve external quality assurance processes in higher education, reducing subjectivity and inconsistency in expert decisions during accreditation.	The use of correlation analysis and fuzzy mathematics allows for a better assessment of expert competence and more precise weighting of criteria.
Model of a Centralized System for Quality Assurance in Higher Education [17]	To propose a centralized model for external quality assurance in higher education that optimizes and harmonizes evaluation and accreditation processes.	The results indicate that a system formalized through Generalized Nets supports the digitalization of processes, enhances document management, reduces errors and time requirements, and strengthens collaboration between institutions and external agencies.
Models for quality assurance in higher education area [18]	To address the challenges of quality assurance in higher education by proposing and analyzing two models with different levels of centralization: a weakly centralized model and a highly centralized model.	Both models enhance transparency, minimize errors, optimize resource utilization, and strengthen data management to support effective self-assessment.

Performance evaluation model for quality assurance in Nigeria higher education [19]	To propose a model and technological architecture for an integrated academic information system designed to support performance evaluation of educational programs in Nigeria.	The model enables multidimensional data analysis, trend visualization, decision support, and the prediction of the impact of quality indicators, effectively addressing the current lack of information integration across institutions.
Quality assurance for online higher education programmes: Design and validation of an integrative assessment model applicable to Spanish universities [20]	To design and validate an integrative model for evaluating the quality of online higher education programs in Spain, integrating component-level quality assessment with continuous program evaluation.	The model, comprising two variables, fourteen dimensions, and 81 indicators, was validated by international experts and, when applied to four programs, facilitated the identification of strengths and areas requiring improvement.
Quality assurance for postgraduate programs: Design of a model applied on a university in Chile [21]	To design a quality assurance model for postgraduate programs at a Chilean university that integrates theoretical, mathematical, and technological foundations to optimize self-regulation, self-assessment, and accreditation processes.	The model, validated by experts and users, is structured into eight dimensions, 48 categories, and 137 indicators, and is supported by a computer platform that automates the evaluation process.
The application of quality assurance criteria in light of governance principles (the Middle East University as a model) [2]	To analyze the application of governance-based quality assurance criteria at Middle East University, with the aim of improving institutional processes and results.	The results show that transparency, participation, and accountability strengthen governance, improve decision-making, and promote a quality culture aligned with national and international standards.
The COMPASS-OK model for quality assurance in higher Education [22]	Present the COMPASS-OK model as a technological solution to automate self-assessment and accreditation processes in higher education in accordance with European ESG standards.	The results demonstrate that implementing these systems reduces resource consumption, minimizes errors, enhances evidence tracking, and has proven effective in multiple accreditation processes in Bulgaria.
The validity of a design technology for a higher education quality assurance system based on the EFQM model [23]	To confirm the validity of a design technology for quality assurance systems in higher education based on the EFQM model.	The results demonstrate that the developed approach satisfies construct, criterion, and content validity requirements, supported by theoretical and experimental analyses conducted in Kazakh universities.

Figure 2 illustrates the geographical distribution of studies on quality assurance in education. Indonesia and Bulgaria show the highest concentration, with three studies each. The United Arab Emirates follows with two studies, while Slovakia, Pakistan, India, Australia, Ukraine, Nigeria, Spain, Chile, Jordan, and Kazakhstan each contribute one study. This map provides a visual representation of the density of research acorss different geographical contexts.

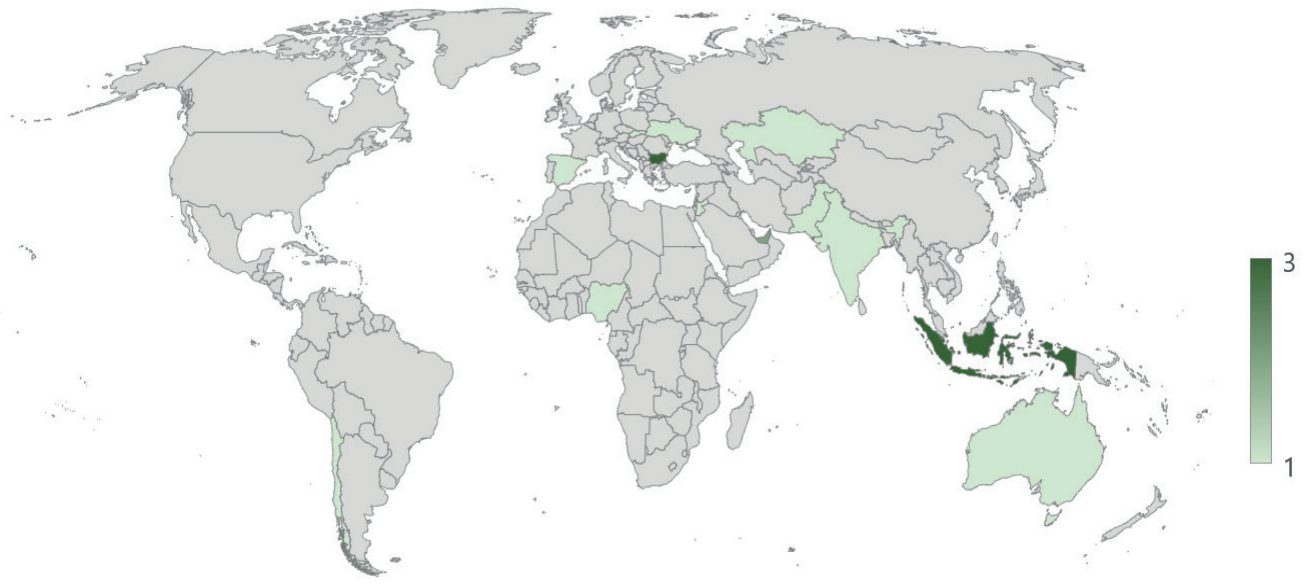

Figure 2. Geographical distribution of studies

Figure 3 presents a bar chart illustrating the accreditation standards used in higher education and their relative frequency of use. The data reveal that the ESG (European Standards and Guidelines) and ISO 9001:2015 standards are the most frequently applied, with four and three mentions, respectively. Other standards, such as ISO 9001:2008 and BAN-PT, are cited only once, highlighting the diversity of accreditation practices across different contexts.

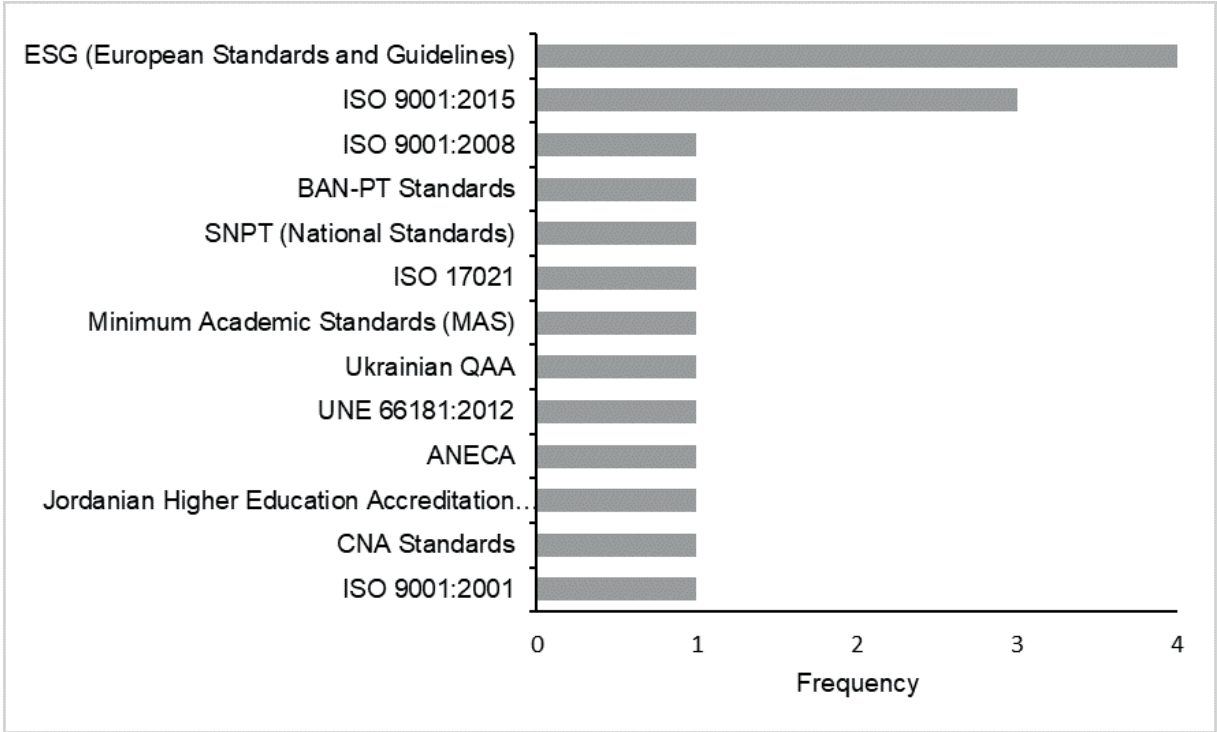

Figure 3. Accreditation standards used in higher education

Figure 4 presents a frequency diagram illustrating the assessment methods employed in studies on quality assurance in education. Self-assessment emerges as the most frequently used method, with four mentions. Interview and observation methods follow, with three mentions each. Other methods, such as surveys, external and internal reviews, and evaluations, appear less frequently. This variety reflects the methodological diversity underlying the assessment of educational quality.

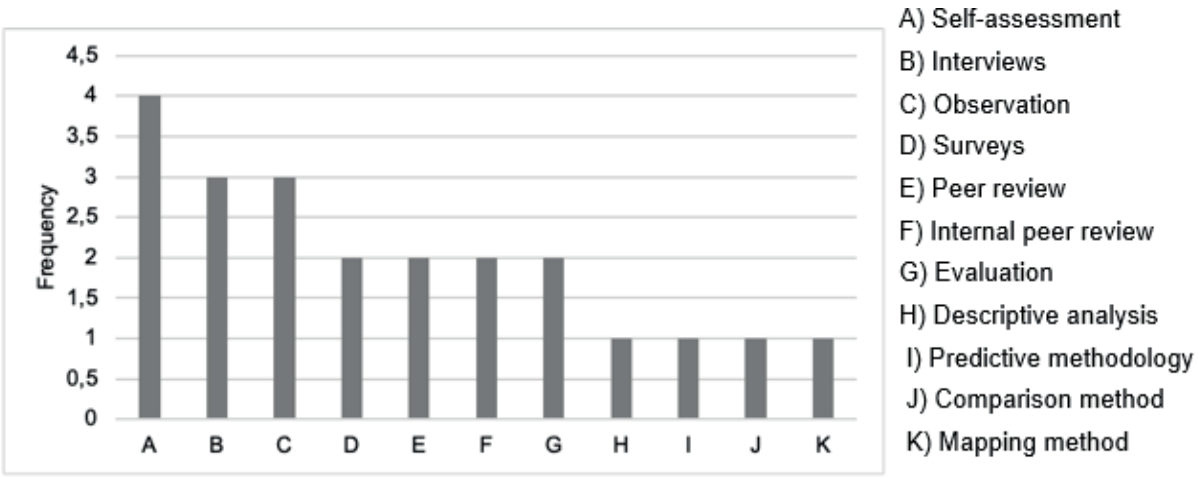

Figure 4. Evaluation Methods Implemented in Higher Education

Table 2 presents the assessment methods used to ensure educational quality, along with the challenges associated with each. Self-assessment reveals limitations related to implementation and resource availability, while interviews highlight linguistic discrepancies with established standards. Observation identifies issues of bureaucratization and limited staff participation. Moreover, methods such as surveys and external reviews face challenges linked to quality assurance and political interference.

Table 2. Evaluation Methods and Associated Challenges

Evaluation Method	Challenge
Self-assessment	Identification of reusable ISO clauses
	Lack of full implementation
	Resource limitations
Interviews	Linguistic and structural differences between ISO and BAN-PT standards
Observation	Overbureaucratization
	Low employee participation
Surveys	Quality assurance
	Accountability issues
External review	Political interference
	Lack of faculty
Internal review	Resource commitment
	Cultural resistance
Evaluation	Subjectivity
Descriptive analysis	Data collection
	Standardization
Predictive methodology	Inadequate resources
Comparison	Lack of specific guidelines
Mapping method	Limited budgets
	Weak infrastructure

DISCUSSION

This review on quality assurance in education presents findings that contrast interestingly with previous research, highlighting both similarities and differences that enrich existing knowledge in the field. Studies by Steinhardt et al.[24], Brika et al.[8], Khuram et al.[25], Bloch et al.[6], and Mireku et al.[26] are examined in relation to the aims of this study.

Steinhardt et al.[24] investigate educational quality within the context of university governance, focusing on the development of quality assurance-related specializations. Their work highlights tensions between educational and managerial approaches, a topic also addressed in this study. However, the present research explores specific assurance models and accreditation standards, offering a more practical and context-specific perspective.

The bibliometric analysis conducted by Brika et al.[8] highlights the importance of mapping research trends and identifying key terms in studies on quality assurance in higher education. Although both works concur on the relevance of these practices, the present study distinguishes itself through its focus on practical implications, exploring evaluation methods and best practices applicable to specific contexts, beyond the data analysis and literary patterns characteristic of Brika et al.[8]

Khuram et al.[25] highlight the relevance of quality assurance in higher education institutions and outline emerging trends and promising practices. While their focus is on assessing the social impact of universities, the present study complements this perspective by offering a comprehensive analysis of the challenges institutions face in implementing assurance models, as well as strategies to mitigate specific obstacles.

The systematic review conducted by Bloch et al.[6] examines quality assurance practices and the institutional conditions that influence their effectiveness. While sharing an interest in institutional contexts, the present study broadens the discussion by incorporating a detailed analysis of the stakeholders involved, emphasizing their role and impact on the implementation of educational quality policies.

Methodologically, qualitative approaches such as self-assessments, interviews, and observations involving key stakeholders prevail. Previous studies, including as Marciniak[20], Mursidi et al.[11], and Martínez et al.[27], propose comprehensive frameworks that integrate multiple dimensions and tools for continuous improvement.

Finally, Mireku et al.[26] address the challenges of quality assurance in higher education in sub-Saharan Africa, identifying constraints such as insufficient funding and a shortage of trained human resources. Although their study focuses on a specific region, the present paper broadens the perspective by considering the diversity of geographical contexts and exploring how these challenges manifest and affect educational quality at different local and regional levels.

This review not only brings previous research into dialogue with current findings but also opens new avenues for understanding and addressing the complexities of quality assurance in education.

In this sense, the study opens opportunities for future research on educational quality assurance and its application in key areas identified herein. It is essential to examine how contextual factors, such as national policies and institutional structures, influence the implementation of quality assurance models. Comparative studies across regions could help identify best practices and develop adaptable frameworks suited to diverse geographical realities.

Furthermore, it is necessary to conduct further evaluations of the effectiveness of existing models, integrating international standards with local frameworks to develop more coherent and adaptable hybrid approaches. It is also crucial to investigate strategies for optimizing stakeholder engagement to enhance educational outcomes. In addition, innovative data collection methods that address current limitations are needed, particularly in institutions with underdeveloped assessment systems, to ensure more consistent and generalizable results.

The limitations of this study relate primarily to its methodology and findings, which are influenced by the geographic and contextual diversity of educational quality assurance. Collecting data across different regions posed challenges in standardizing metrics, as each country and institution applies its own evaluation criteria. This variability affected the consistency of the results, making it difficult to draw fully comparable conclusions.

Furthermore, the heterogeneity of quality assurance models—whether grounded in international standards or shaped by local regulations—complicated direct comparisons among the analyzed cases. This diversity posed challenges in identifying common trends and formulating recommendations applicable across global contexts.

CONCLUSIONS

The present study demonstrates that quality assurance in higher education is a multifocal process that extends beyond the mere verification of compliance with standardized indicators functioning instead as a mechanism for continuous improvement. The findings of this systematic review reveal that assurance models, despite their geographical and methodological diversity, share a common purpose: strengthening institutions and fostering academic excellence. Moreover, the use of the PRISMA 2020 methodology enabled the identification of patterns and best practices that underscore the need to adopt comprehensive evaluation systems integrating the participation and inclusion of a wide range of stakeholders and, above all, adapting to the specific contexts and circumstances of each institution.

In light of the foregoing, it is essential to underscore the urgent need to develop flexible, collaborative, and context-sensitive frameworks that facilitate the integration of quality assurance efforts while acknowledging the diversity of higher education systems. Advancing toward hybrid models that combine international standards with locally grounded approaches will require innovation and the sustainable strengthening of institutional quality and accreditation policies. In this way, quality assurance becomes consolidated as a strategic management instrument for higher education institutions.

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CONFLICT OF INTEREST

The authors declare that there is no conflict of interest.

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