HEGP
Higher Education Governance & Policy
ISSN: 2717-8676 **Volume:** 5 **Issue:** 2

Quality Assurance in Higher Education in the 21st Century: Strategies and Practices for New Generation Universities

Hafize Nurgül Durmuş Şenyapar[1*] & Ramazan Bayındır[2]
[1]Faculty of Health Sciences, Gazi University, Ankara, Türkiye
[2]Faculty of Technology, Gazi University, Ankara, Türkiye

Article Type: Research Article

Corresponding Author: Hafize Nurgül Durmuş Şenyapar, nurguld@gazi.edu.tr

Cite as: Durmuş Şenyapar, H. N., & Bayındır, R. (2024). Quality assurance in higher education in the 21st century: strategies and practices for new generation universities. *Higher Education Governance & Policy, 5*(2), 115-133. doi: 10.55993/hegp.1573331

Access: https://doi.org/10.55993/hegp.1573331

HEGP
Higher Education Governance & Policy
ISSN: 2717-8676
Volume: 5
Issue: 2

Quality Assurance in Higher Education in the 21st Century: Strategies and Practices for New Generation Universities

Hafize Nurgül Durmuş Şenyapar[1*] & Ramazan Bayındır[2]
[1]Faculty of Health Sciences, Gazi University, Ankara, Türkiye
[2]Faculty of Technology, Gazi University, Ankara, Türkiye

Abstract

This study aims to examine the components of quality assurance systems in higher education and the effects of these systems on new-generation universities. Through literature review and synthesis of findings, the essential components of quality assurance systems, their role in modern universities, and the effects of these systems on performance have been comprehensively analyzed. In the study, the structural elements, operational mechanisms, and accreditation processes of quality assurance systems have been detailed, and the effects of these processes on the academic and administrative performances of new-generation universities have been evaluated. In addition, quality assurance strategies have been suggested that align with the characteristic features of new-generation universities, such as technology-oriented education models, flexible curriculum structures, and industry collaborations. In addition, within the scope of the research, it emphasizes the contributions of quality assurance systems in compliance with international standards, increasing student satisfaction and strengthening institutional reputation. It is aimed at making significant contributions to the literature by offering new perspectives in the field of quality assurance to higher education institutions in Turkey.

Keywords: Quality assurance, Sustainability, Accreditation, Strategic planning, Turkish higher education, New generation universities

Introduction

The 21st century brings opportunities and challenges for higher education institutions, driven by technological advancements, globalization, and evolving labor market dynamics that press universities to adapt their educational approaches (Yin, 2024). In Turkey, these pressures have given rise to new-generation universities that stand apart from traditional institutions by focusing on interdisciplinary, technology-centered education and close collaboration with industry to equip students for a complex and uncertain future (Kır, 2020). New-generation universities in Turkey, as elsewhere, prioritize flexible, student-centered learning environments that align with digital transformation trends, aiming to cultivate digital skills, critical thinking, and adaptability among students. Maintaining and enhancing education quality amidst rapid changes presents unique challenges for these universities. Quality assurance systems are crucial in maintaining educational standards, promoting continuous improvement, and enhancing institutional accountability (Aithal et al., 2024). In Turkey, these systems are essential for increasing student satisfaction and bolstering international competitiveness. However, new-generation universities often struggle to fully align with traditional quality assurance frameworks due to their innovative structures and flexible educational models, which sometimes fall outside conventional standards. In addition, Turkey's unique higher education context, with a growing demand for skilled professionals, digitally conscious students, and specific regulatory requirements, intensifies the challenges of implementing these systems effectively (Carayannis & Morawska-Jancelewicz, 2022;

[*] **Corresponding Author:** Hafize Nurgül Durmuş Şenyapar, nurguld@gazi.edu.tr
[1]ORCID$_1$: 0000-0003-0927-1643; ***[1]ORCID$_2$:*** 0000-0001-6424-0343

(Research Article) **Cite as:** Durmuş Şenyapar, H. N., & Bayındır, R. (2024). Quality assurance in higher education in the 21st century: strategies and practices for new generation universities. *Higher Education Governance & Policy, 5*(2), 115-133. doi: 10.55993/hegp.1573331

Received: October 24, 2024; ***Revised:*** November 14, 2024; ***Accepted:*** November 23, 2024; ***(e-)Published:*** December 31, 2024

Castro Benavides et al., 2020). Internationally, the issues faced by Turkish new-generation universities resonate in higher education research. Rapid technological developments and evolving industry needs, common across global higher education, underscore the need for quality assurance systems to evolve. This creates a critical need for these institutions to adopt tailored approaches to quality assurance that accommodate innovative education models and keep pace with technological and societal changes (Mohamed Hashim et al., 2022). As both Turkish and international examples reveal, addressing these challenges requires reimagining quality assurance systems, demonstrating the importance of flexibility and adaptation in educational quality standards (Büyükgüzel et al., 2023; Liu et al., 2023). To address these challenges, Turkish new-generation universities must adapt existing quality assurance frameworks and pioneer innovative approaches that align with their unique educational missions. This requires embracing a contextual understanding of quality assurance that accommodates rapid technological shifts, diverse student needs, and industry expectations. Some approaches could serve as valuable case studies within the broader field of higher education research, illustrating how quality assurance systems can be reimagined to support dynamic, interdisciplinary, and technology-driven educational models worldwide. As such, the experience of Turkish new-generation universities could inform global strategies for quality assurance, positioning them as leaders in redefining standards for the future of higher education.

The evolution of new-generation universities in Turkish higher education reflects broader global trends while also addressing unique national challenges. Contextually, Turkey's higher education system has expanded rapidly in recent decades, driven by increasing student enrollment, regional development goals, and a demand for skilled professionals. This expansion has brought challenges, such as maintaining quality amidst growth, aligning institutional goals with rapidly changing labor market demands, and navigating regulatory complexities (Carayannis & Morawska-Jancelewicz, 2022). New-generation universities, with their emphasis on technology-driven education, flexible learning environments, and industry collaborations, aim to address these challenges. However, they often encounter difficulties in fully aligning with traditional quality assurance frameworks, which may not account for their innovative structures and interdisciplinary approaches (Lapteva & Efimov, 2016).

For example, ensuring the quality of interdisciplinary programs and project-based learning initiatives in these institutions requires tailored quality assurance mechanisms, as these elements often fall outside conventional evaluation criteria. Additionally, Turkey's geographic and cultural positioning as a bridge between Europe and Asia adds unique dimensions to its higher education system, offering opportunities for international collaboration and creating challenges in meeting diverse expectations (Gaston & Ochoa, 2023). These issues are not confined to Turkey; they resonate with the experiences of higher education systems globally, particularly in emerging economies, where rapid expansion and innovation coexist with the need for robust quality assurance.

By addressing these contextual challenges, Turkish new-generation universities provide a valuable case for international higher education research. They exemplify how institutions can adapt to technological, societal, and economic shifts while navigating unique local conditions. Lessons from Turkey's experiences can inform global strategies for integrating innovation into quality assurance systems, fostering relevance for the international academic community.

Purpose of the Study and Research Questions

The primary purpose of this study is to define the components of quality assurance systems in higher education and evaluate their effects on new-generation universities in Turkey. New-generation universities have modern features such as technology-oriented education models, innovation, internationalization, and flexible learning structures. The study aims to increase the quality of higher education and support the success of new-generation universities by analyzing the contributions of quality assurance systems to the overall performance of these universities. The research aims to find comprehensive answers to the following questions:

1. What are the essential components of quality assurance systems in Turkish higher education? This question examines the structural elements of quality assurance systems, their operating

mechanisms, and the vital elements that constitute these systems in Turkey. Additionally, it explores the relationships between the components and their effects on the overall system.

2. How do quality assurance systems affect the performance of new-generation universities in Turkey? This question evaluates the impact of quality assurance systems on Turkish new-generation universities' academic, administrative, and institutional performance, focusing on components such as student success, institutional efficiency, research outputs, and international competitiveness.

Within the framework of these research questions, the study aims to comprehensively analyze quality assurance systems in higher education and develop practical quality assurance approaches for new-generation universities. The results guide higher education institutions, policymakers, and administrators and significantly contribute to academic literature.

Conceptual Framework

Quality assurance is a systematic approach to ensure that higher education institutions' education, research, and community service activities comply with specific standards and continuously improve them. This concept involves institutions regularly evaluating and auditing their internal processes by external stakeholders (Zuhairi et al., 2020). The essential components of quality assurance include institutional self-assessment, external assessment, accreditation, and continuous improvement processes. These components interact with each other and aim to increase the overall quality level of the institution (Taşcı & Lapçın, 2023).

Today, globalization and technological developments require higher education institutions to operate more competitively. In this context, quality assurance systems are critical in ensuring institutions comply with international standards, increasing student satisfaction, and strengthening institutional reputation. In addition, quality assurance increases institutional efficiency by encouraging the efficient use of resources and helps higher education institutions better fulfill their social responsibilities (Aydoğdu, 2023; Gaston & Ochoa, 2023).

Unlike traditional higher education models, new-generation universities adopt technology-focused, flexible, and innovative educational approaches (Lapteva et al., 2016). These universities stand out with their structures that can adapt to rapidly changing world conditions, encourage interdisciplinary studies, and work closely with industry. The main features of new-generation universities include intensive use of digital technologies, flexible curriculum structures, project-based learning approaches, and integration with global networks (Tien et al., 2022). New-generation universities in Turkey represent a transformative approach to higher education. Unlike traditional universities, which often emphasize classical disciplines and conventional teaching methods, new-generation universities focus on interdisciplinary and technology-driven education models. They prioritize flexible learning structures, innovation, and strong collaborations with industry to prepare students for the rapidly evolving global workforce. These institutions also align closely with digital transformation trends, integrating advanced technologies and fostering critical thinking and entrepreneurship skills among students. Traditional universities, in contrast, maintain more structured, discipline-focused curricula with less emphasis on adaptability and technological integration.

With their innovative structures and functions, new-generation universities are developing research and education models that go beyond the boundaries of traditional academic disciplines. These institutions emphasize entrepreneurship, innovation, and critical thinking skills to prepare students for the business world of the future (Jackson & Rowe, 2023). They also support the continuous development of graduates by offering lifelong learning opportunities (Rodriguez-Salvador & Castillo-Valdez, 2023). These features allow the development of research and education models that go beyond the boundaries of traditional academic disciplines. New-generation universities are pioneers in transforming academic knowledge into practical applications by actively producing solutions to social problems.

Foundations of quality assurance include various approaches and processes that ensure effective and efficient management of higher education institutions. These foundations provide a framework that targets institutions' continuous development and improvement (Poliakova, 2018). Strategic planning is

an essential theoretical foundation of quality assurance. This approach enables institutions to determine their long-term goals, allocate the resources required to achieve them, and regularly evaluate their performance. Strategic planning helps institutions adapt to changing conditions and use resources most effectively (Zaid et al., 2020).

Accreditation processes are another essential theoretical basis for quality assurance. These processes are external evaluation mechanisms that evaluate and approve the compliance of higher education institutions with specific standards. Accreditation ensures that the quality of institutions' educational programs, learning outcomes, and institutional management processes are evaluated by independent organizations (Duarte & Vardasca, 2023; Gaston & Ochoa, 2023; Şendur Atabek, 2023). Internal and external evaluation mechanisms are essential elements that increase the effectiveness of quality assurance. Internal evaluation allows institutions to review their performance and identify areas for improvement systematically. External evaluation, on the other hand, includes processes conducted by independent experts that objectively evaluate the institution's performance. Using these two mechanisms together allows institutions to better understand their strengths and weaknesses and make necessary improvements (Ruben et al., 2023; Saroyan & Frenay, 2023).

Continuous improvement processes are a theoretical foundation reflecting quality assurance's dynamic and evolutionary nature. This approach requires institutions to monitor, evaluate, and improve performance continuously. Models such as the Deming Cycle (Plan-Do-Check-Act) are widely used to implement continuous improvement processes (Sayah & Khaleel, 2022). These processes enable institutions to adapt to changing conditions quickly and continuously raise their quality standards. These theoretical foundations, including Strategic Planning (Zaid et al., 2020), Accreditation Processes (Duarte & Vardasca, 2023), Internal and External Evaluation Mechanisms (Ruben et al., 2023), and Continuous Improvement Processes (Sayah & Khaleel, 2022), ensure that quality assurance in higher education is addressed with a holistic approach. Strategic planning enables institutions to determine long-term goals and align resources effectively. Accreditation processes serve as external validation mechanisms, evaluating compliance with established quality standards. Internal and external evaluation mechanisms systematically assess institutional performance and identify areas for improvement. Finally, continuous improvement processes, such as the Plan-Do-Check-Act cycle, foster ongoing adaptation and enhancement, helping institutions achieve sustainable success.

Method of the Study

This study adopts a literature review and synthesis methodology to examine the impact of quality assurance systems in higher education on new-generation universities. The primary sources are existing academic literature on quality assurance systems and studies addressing the performance and unique characteristics of new-generation universities. The literature review focuses on research detailing the core components of quality assurance, such as institutional self-assessment, external assessment, accreditation, and continuous improvement, and evaluates the transformative impact of these systems on higher education institutions.

Literature Selection and Filtering

Specific criteria were applied for selecting, filtering, and analyzing the literature to ensure a structured and transparent research process. Relevant sources were identified using keywords related to "quality assurance systems," "new-generation universities," "higher education," and specific aspects like "technology-oriented education models," "innovation," "internationalization," and "flexible learning structures." The selection criteria prioritized studies published within the past decade to capture the most recent developments, focusing on peer-reviewed articles, institutional reports, and widely recognized academic sources. Exclusion criteria involved studies that did not explicitly address quality assurance or higher education frameworks.

Synthesis and Analysis

The selected literature was systematically reviewed to identify recurring themes, trends, and gaps. A thematic synthesis approach was applied, grouping findings into major themes: institutional self-assessment, external evaluation, accreditation, and continuous improvement processes. The analysis

emphasized the interaction of these components with the innovative structures of new-generation universities, focusing on key performance indicators such as student success, research outputs, institutional efficiency, and international competitiveness.

Narrative Creation

A narrative synthesis strategy was adopted to integrate findings into a coherent discussion. The narrative aligns thematic insights with the study's research questions and contextualizes the findings within the Turkish higher education landscape. This method highlights the unique challenges faced by new-generation universities in Turkey, such as aligning interdisciplinary education and digital transformation with traditional quality assurance frameworks while also drawing comparisons with international practices. Specific strategies, such as tailoring quality assurance mechanisms to innovative educational models, were emphasized to address these challenges.

Contextualization for Turkey and Beyond

The study further contextualizes its findings to provide strategic recommendations tailored to Turkish higher education institutions while demonstrating their relevance to the international research community. The insights are designed to inform global strategies for integrating innovation into quality assurance practices, emphasizing the need for flexible systems to accommodate diverse institutional models and technological advancements.

Through this structured and transparent methodological approach, the study aims to provide actionable insights for improving institutional practices and contribute to the broader discourse on quality assurance in higher education.

Findings

Quality assurance systems in higher education are a comprehensive framework designed to ensure continuous improvement of institutions' education, training, research, and social contribution activities and compliance with specific standards (Javed & Alenezi, 2023). The effectiveness of these systems is based on various essential components that interact with each other. New-generation universities increasingly attach importance to quality assurance systems to adapt to rapidly changing global education dynamics and gain competitive advantage. The essential components of quality assurance systems in higher education are determined to ensure the sustainability of a university's academic and administrative processes following quality standards. These systems include both internal and external evaluation processes. The essential components of quality assurance systems in higher education and the effects of their components on university performance can be listed under the following main headings.

Components of Quality Assurance Systems

1.Internal Quality Assurance: Internal Quality Assurance (IQA) refers to an institution's overarching framework and processes to ensure continuous monitoring, evaluation, and enhancement of its activities. IQA encompasses establishing quality offices, coordinators, and commissions that systematically oversee quality policies, feedback mechanisms, and improvement cycles (Lucander & Christenson, 2020). It involves creating a culture of continuous quality enhancement within the institution by integrating quality standards into all operational areas, from teaching and research to administrative support and governance. The ultimate goal of IQA is to embed quality assurance as a core institutional value and ensure that all processes align with the institution's mission and strategic objectives.

2.Evaluation Mechanisms: Internal Evaluation (IE), on the other hand, is a component of IQA and refers specifically to the systematic review and assessment of institutional performance against predefined standards and objectives (Jingura & Kamusoko, 2019). IE includes self-assessment reports, internal audits, and performance monitoring based on key indicators (Javed & Alenezi, 2023; Kadhila & Iipumbu, 2019). These evaluations allow institutions to identify strengths and weaknesses, track progress over time, and make data-driven decisions for improvement. While IE is a critical tool within IQA, it focuses more narrowly on performance measurement and accountability, whereas IQA operates as a broader system. By clearly distinguishing between IQA and IE, institutions can understand these

processes' complementary roles in achieving continuous quality enhancement. IQA establishes the framework and culture for quality, while IE provides the tools and methods to evaluate and improve specific areas of institutional performance. On the other hand, external evaluation involves processes conducted by independent experts or accreditation bodies that objectively evaluate the institution's performance. Both types of assessment allow institutions to identify their strengths and weaknesses and make necessary improvements (Rohman et al., 2023).

3.Institutional Accreditation: Evaluations and accreditation processes conducted by independent accreditation bodies are an essential component of quality assurance. These processes measure the compliance of institutions with national and international standards. Institutional accreditation evaluates a university's overall compliance and sustainability with quality standards (López et al., 2022). It covers a holistic evaluation of the institution's various aspects (education, research, management, student services, etc.). External evaluation and accreditation processes document universities' compliance with national and international standards (Spowart & Turner, 2022). In other words, institutional accreditation ensures the recognition of the university at national and international levels, increases its reliability and reputation, and encourages international collaborations. Accreditation processes strengthen the university's internal quality assurance systems and ensure regular review of all processes. Institutional accreditation increases institutional efficiency and improves the university's performance by supporting strategic planning and quality improvement processes (Jiménez-Bucarey et al., 2021). This accreditation strengthens the university's relationships with its stakeholders and encourages stakeholder participation; thus, its role as a contributor to society is reinforced (Romanowski, 2022).

4.Program Accreditation: Program accreditation documents the quality and compliance of a particular educational program with national or international standards. This process covers many components, including program design, content, teaching methods, measurement and evaluation, and faculty qualifications (Suresh Kumar, 2017). Accreditation processes usually include self-assessment, site visits, and regular reporting (Amaral & Norcini, 2023).

Program accreditation ensures the quality of education students receive and makes graduates more competitive in business (Gora et al., 2019). Accredited programs increase the attractiveness of students and faculty and improve the university's overall reputation. While accreditation ensures that institutions comply with international standards, it also incentivizes continuous improvement (Andreani et al., 2020). The feedback and suggestions collected during the accreditation process encourage the constant updating and improvement of programs, thus increasing the quality of education and training (Almurayh et al., 2022). Accreditation of programs also opens doors for international student and academic collaborations and increases the global recognition of the university.

5.Quality Assurance Policy and Strategy: A quality policy and strategy aligned with the institution's mission, vision, and strategic goals reflects the institutional commitment to quality. The policy and strategy guide the university's overall performance and ensure that all stakeholders focus on the same goals (Medne et al., 2020). The institution's commitment to continuously improving quality aligned with its mission, vision, and strategic goals enhances its reputation and supports institutional sustainability.

6.Strategic Planning: Strategic planning means determining the long-term goals of a university and developing the strategies and action plans required to achieve these goals (Di Nauta et al., 2020). This process ensures that the institution is directed toward the future and aligned with its mission, vision, and values. Strategic planning allows the institution to analyze its current situation, foresee future opportunities and threats, and use its resources effectively and efficiently, increasing institutional performance (Di Nauta et al., 2020). It supports the sustainable growth and development of the university by focusing on long-term goals (Makki et al., 2023). Strategic planning guides the university's progress in key areas such as education, research, community service, and internationalization. Regular monitoring and evaluation to achieve goals reinforces the culture of continuous improvement and increases the university's competitiveness (M. Ghoneim Sywelem & Mohamed Elsayed Makhlouf, 2023).

7.Quality of Learning and Teaching: The increase in the quality of education and research is one of the most apparent effects of quality assurance systems. Planning, implementation, and evaluation processes for education and training activities must follow quality standards, including program design, curriculum development, teaching methods, and measurement-evaluation processes. Investments in the quality of learning and teaching in new-generation universities increase student success and satisfaction. Clear definitions of learning outcomes, alignment of current and student-centered curricula with industry needs, innovative teaching methods, and strong measurement-evaluation processes enable graduates to be more competitive in the business world and increase the capacity to attract students (Hailikari et al., 2022).

8.Research, Development, and Entrepreneurship: It includes the management of research and innovation processes within the framework of quality assurance, academic freedom, and ethical rules (Cheah et al., 2023). Research infrastructure, funding processes, and publication quality are also evaluated in this component. The quality of research and development activities directly affects the scientific contributions and innovation capacities of universities, encourages interdisciplinary collaboration, and ensures the elevation of research ethical standards (Horta & Santos, 2020, Fomba et al., 2023; Kayyali, 2023; Shattuck, 2023). High-quality research outputs enable the university to rise in national and international rankings, increase funding opportunities, and strengthen its academic reputation (Li & Yin, 2023; Miotto et al., 2020).

9.Quality of Administrative and Support Services: This covers the quality of the university's administrative processes, student and staff services, Information technologies infrastructure, financial management, and other support services. The quality of these services directly affects the university experience of students and staff (Jackson et al., 2023). Effective administrative processes and quality support services increase satisfaction, operational efficiency, and student success rates.

10.Data Management and Evidence-Based Decision Making: The effectiveness of data collection, analysis, and reporting systems used to monitor the institution's performance is critical. Evidence-based decision-making is an essential element of quality improvement processes. Data management and evidence-based decision-making allow universities to evaluate their performance with objective measures and make strategic decisions based on data (Jayanti & Sarja, 2019). This enables more efficient use of resources, accelerates performance improvement processes, and facilitates the achievement of strategic goals.

11.Stakeholder Participation and Feedback: Systematic collection and evaluation of the opinions and feedback of stakeholders such as students, academic and administrative staff, alumni, the business world, and society lie at the core of quality processes. Active participation of stakeholders in the process and evaluation of regular feedback strengthens the university's ties with the social and business world (My Nguyen et al., 2021). This ensures that programs are more up-to-date and needs-oriented, facilitates the adaptation of graduates to the business world, and improves the institution's perception of society. Quality assurance systems encourage the active participation of students in decision-making processes. This strengthens students' sense of institutional belonging and contributes to their personal and professional development. With this participatory approach, new-generation universities position students as individuals receiving education and stakeholders shaping the institution's future (Haverila et al., 2021).

Student feedback is a cornerstone of quality assurance systems, offering critical insights into the effectiveness of education and training processes (Haverila et al., 2021). Measuring student satisfaction involves gathering their opinions on the quality of education, institutional services, and overall university experience. Methods such as satisfaction surveys, focus group interviews, and regular meetings with student representatives provide platforms for students to share their perspectives (Jiménez-Bucarey et al., 2021). This feedback enables new-generation universities to continuously improve the learning experience, adapt teaching methods, and refine educational programs to align with students' evolving needs and expectations (Jackson & Tomlinson, 2022). Moreover, a student-centered approach informed by systematic feedback collection fosters responsiveness to students' diverse needs,

enhancing their satisfaction and success (Jayanti & Sarja, 2019; Wong & Chapman, 2023; Yıldırım & Çatı, 2023). By actively integrating students' views into institutional processes, universities strengthen the connection between educational quality and learner outcomes, promoting a culture of continuous improvement.

12.Institutional Sustainability: Quality assurance systems are another vital impact on new-generation universities (Vykydal et al., 2020). These systems enable institutions to systematically monitor and improve their financial, academic, and operational processes (Lundberg & Öberg, 2021). New-generation universities can use resources more effectively, strengthen risk management, and achieve their long-term strategic goals through quality assurance systems. In addition, these systems increase institutions' transparency and accountability and strengthen stakeholders' trust (My Nguyen et al., 2021). This strengthens the ties of new-generation universities with society and industry and increases their institutional reputation. Sustainability also covers the performance of new-generation universities in environmental and social responsibility areas (Hernandez-Diaz et al., 2020). Quality assurance systems help institutions increase their social impact by encouraging continuous improvement of practices in these areas (Albloushi et al., 2023; Marrucci et al., 2024).

The components and effects of quality assurance systems in higher education are closely intertwined, each contributing to specific institutional outcomes. As outlined in Table 1, components such as Internal Quality Assurance (IQA), Strategic Planning, and Accreditation Processes establish the structural and operational framework necessary for continuous quality enhancement. These mechanisms collectively improve institutional efficiency, enhance student success, and strengthen international competitiveness. For example, data management and evidence-based decision-making enable strategic resource allocation, while stakeholder participation fosters programs tailored to societal and industry needs. By distinguishing between components and effects, the table provides a clear hierarchy of how quality assurance systems function and their transformative impact on higher education institutions.

Table 1. Components vs. effects of quality assurance systems

Component	Effect
Internal Quality Assurance (IQA)	Embeds a culture of continuous quality improvement throughout the institution.
Internal and External Evaluation Mechanisms	Identifies strengths and weaknesses, enabling data-driven decisions for improvement.
Accreditation Processes	Enhances institutional reputation and ensures compliance with national and international standards.
Continuous Improvement Processes	Supports iterative adaptation to changing conditions, ensuring long-term success.
Strategic Planning	Aligns institutional resources and goals, increasing performance and sustainability.
Data Management and Evidence-Based Decision Making	Improves resource efficiency and strategic alignment through informed decisions.
Stakeholder Participation and Feedback	Strengthens ties with the social and business world and ensures programs meet stakeholder needs.
Quality Assurance Policy and Strategy	Ensures alignment with institutional mission and vision, enhancing overall performance.
Quality of Learning and Teaching	Increases student success, satisfaction, and graduate competitiveness in the workforce.
Research, Development, and Entrepreneurship	Promotes interdisciplinary collaboration, elevates research ethics, and boosts institutional innovation capacity.

Component	Effect
Quality of Administrative and Support Services	Improves operational efficiency and enhances the university experience for students and staff.
Institutional and Program Accreditation	Ensures global recognition, encourages international collaborations and improves educational quality.

Quality assurance systems and their components guide higher education institutions to maintain and develop their quality standards, contribute to the continuous improvement of institutional performance, and make significant contributions in areas such as strengthening participation and ensuring institutional sustainability (Javed & Alenezi, 2023). They play essential roles in areas such as increasing the quality of education and research of new-generation universities, strengthening student satisfaction and participation, and ensuring institutional sustainability. They create a transformative power in higher education by combining new-generation universities' dynamic structure and innovative approaches. The interaction that will shape the future education models strengthens the role of higher education in social and economic development and increases global competitiveness (Stukalo & Lytvyn, 2021).

As shown in Fig.1. (Al-Zoubi et al., 2023; Batoon, 2022; Gamage et al., 2020; Pedro & Kumar, 2020), quality assurance systems in new-generation universities significantly impact student success, institutional efficiency, research outcomes, and international competitiveness. These systems enhance educational quality by boosting student achievement, integrating technology, and promoting innovative teaching methods. Institutional efficiency is also improved, as quality assurance encourages resource optimization, leading to cost reductions and increased operational effectiveness. In research, quality assurance raises the standards of research processes and fosters participation in national and international research initiatives. Furthermore, compliance with international accreditation standards strengthens these institutions' global presence, supporting integration into international education and research networks and enhancing their competitiveness on a global scale.

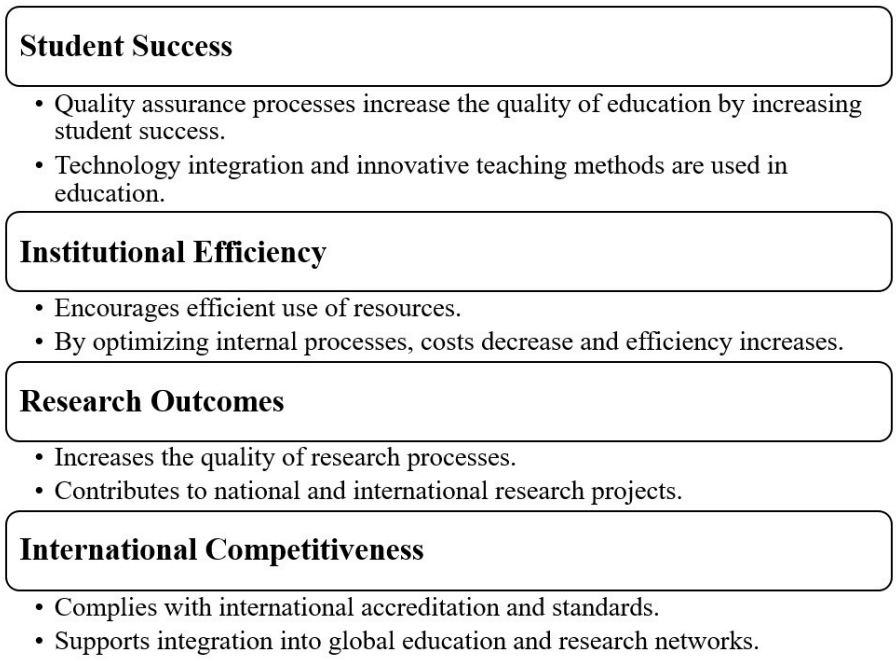

Figure 1. Effects of Quality Assurance Systems in New Generation Universities

Innovative approaches in strategic quality assurance practices are very important for new-generation universities. These approaches include quality management systems focused on flexibility and agility, establishing a culture of continuous improvement, and effective use of data analytics (Asif & Raouf,

2013). Some universities are developing internal quality assessment systems to complement traditional accreditation processes. These systems are built on fast feedback loops and agile management principles, allowing universities to adapt to changing conditions quickly (Mattos et al., 2023). In addition, integrating advanced technologies such as artificial intelligence and machine learning into quality assurance processes allows the development of data-driven decision-making mechanisms (Bondzi–Simpson & Agomor, 2021; Rybinski, 2022; Sharvashidze et al., 2023).

As shown in Fig.2. (de Wit & Altbach, 2021; Guo et al., 2020; Mulenga, 2020; Rosienkiewicz et al., 2024), new-generation universities are characterized by a strong emphasis on technology-focused education, flexible curriculum structures, project-based learning, and integration with global networks, all supported by robust quality assurance systems. These systems play a critical role in embedding technology into educational processes and evaluating its effectiveness, ensuring that digital tools enhance learning outcomes. The curriculum is continuously reviewed and improved to maintain its flexibility, meeting the evolving needs of students and industries alike. Project-based learning is also incorporated, allowing students to gain hands-on experience through real-world applications. Moreover, quality assurance systems facilitate international collaborations, enabling universities to connect with global networks and contribute to an interconnected educational landscape.

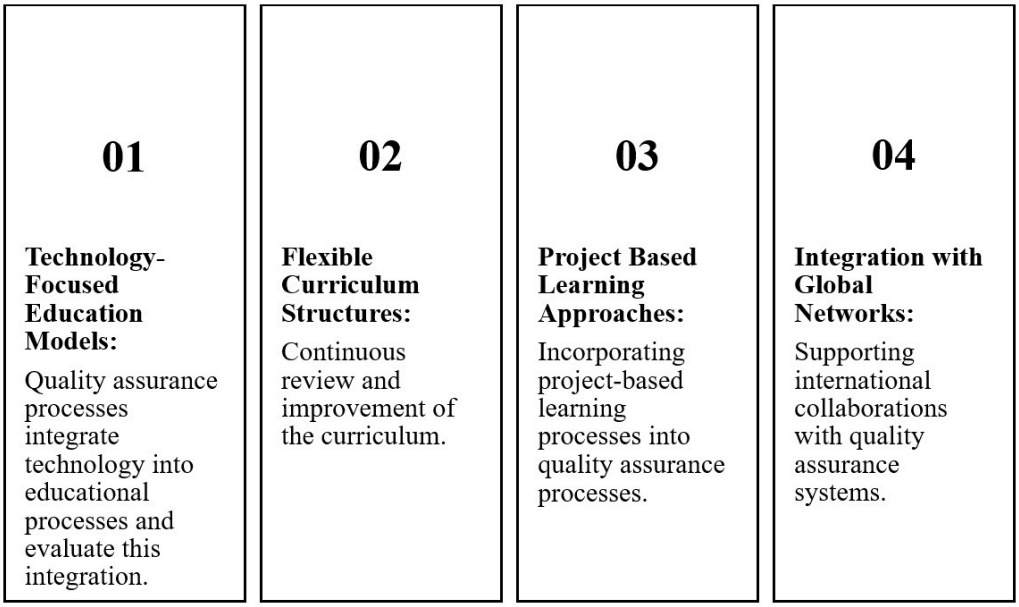

Figure 2. Characteristics of New Generation Universities and Quality Assurance Systems

An essential dimension of strategic quality assurance practices for new-generation universities is the establishment of strong collaborations with industry and society. These collaborations ensure that educational programs align with industry needs, research projects produce solutions to societal problems, and students gain practical experience (Suparno et al., 2023; Manotungvorapun & Gerdsri, 2021). By establishing joint laboratories with industry partners, R&D activities focus on real-world problems (Gerdsri & Manotungvorapun, 2022). Such collaborations increase the effectiveness of universities' quality assurance systems while strengthening their social impact (Cirella & Murphy, 2022). In addition, projects carried out with non-governmental organizations help develop students' sense of social responsibility and increase universities' social contribution (Nsanzumuhire & Groot, 2020; Tseng et al., 2020).

Technological integration and digitalization have become indispensable parts of strategic quality assurance practices for new-generation universities. In this context, universities are increasing efficiency and raising quality standards by transferring their education-training processes, research activities, and administrative transactions to digital platforms (Rahhali et al., 2021). Online learning management

systems allow real-time monitoring of student performance and the provision of personalized learning experiences (Vivek & Ramkumar, 2021).

Cloud-based research management systems facilitate international collaborations, while big data analytics tools enable detailed institutional performance evaluation (Al-Jumaili et al., 2023). In addition, innovative applications such as blockchain technology increase the security and transparency of academic documents (Bednarski, 2024; Rella et al., 2024; Rosak-Szyrocka, 2024).

Strategic quality assurance practices for new-generation universities go beyond traditional approaches and adopt an innovative, collaborative, and technology-oriented approach (Moscardini et al., 2022). Successful practices in Turkey and the world, creative approaches, industry and society collaborations, technological integration, and digitalization help these universities raise their quality standards and increase their social impact (Chankseliani et al., 2021). These strategic practices ensure that new-generation universities are ready for future challenges and achieve sustainable success (Schofer et al., 2021).

The findings highlight that while new-generation universities are transforming the higher education landscape with innovative and technology-driven models, they also face distinct challenges that require targeted strategies. These challenges include aligning interdisciplinary programs with traditional quality assurance frameworks, integrating advanced technologies, fostering meaningful industry collaborations, and achieving international competitiveness. To address these issues effectively, strategic approaches must be tailored to these institutions' dynamic and flexible nature. Table 2 summarizes new-generation universities' key challenges and proposes strategies to overcome them, ensuring their continued growth and success.

Table 2. Challenges and strategies in new-generation universities

Challenge	Proposed Strategy
Alignment of interdisciplinary programs with quality assurance frameworks	Develop tailored evaluation criteria and frameworks that address the unique nature of multidisciplinary studies.
Rapid technological advancements and digital transformation	Integrate advanced technologies such as artificial intelligence and big data analytics into quality assurance processes.
Establishing meaningful industry collaborations	Build joint laboratories, create shared research initiatives, and align educational outcomes with industry needs.
Adapting quality assurance processes to innovative educational models	Implement flexible quality management systems and agile frameworks to accommodate nontraditional approaches like project-based learning.
Ensuring international competitiveness and recognition	Pursue international accreditation and establish partnerships with global educational and research networks.
Meeting diverse student expectations in dynamic learning environments	Design student-centered curricula and continuously update programs to reflect evolving societal and industry needs.
Balancing institutional sustainability with academic and social responsibilities	Apply comprehensive quality assurance systems that include financial sustainability and environmental responsibility measures.

These strategies reflect the need for tailored, flexible approaches to address the dynamic nature of new-generation universities. By implementing these strategies, institutions can better align their innovative practices with robust quality assurance systems. Adaptability and innovation in quality assurance practices ensure that new-generation universities remain at the forefront of academic and societal advancement.

Conclusion and Recommendations

Summary of Key Findings

This study examined the essential components of quality assurance systems in higher education and their impact on the performance of new-generation universities, with a particular focus on the Turkish context. The analysis identified vital components such as internal quality assurance, external evaluations, accreditation processes, strategic planning, and continuous improvement mechanisms. These systems significantly enhanced institutional efficiency, student success, and global competitiveness. The research also highlighted the unique challenges faced by new-generation universities, including aligning interdisciplinary programs with traditional quality frameworks, integrating advanced technologies, and fostering industry collaborations.

Implications and Significance

The findings underscore the transformative potential of tailored quality assurance systems for addressing the specific needs of new-generation universities. By adopting flexible and innovative approaches, these systems can help institutions maintain academic excellence, achieve sustainable development, and strengthen their international presence. This study contributes to the literature by offering a nuanced understanding of the interplay between quality assurance practices and the dynamic structures of new-generation universities, providing a valuable framework for policymakers and academic leaders globally.

Recommendations

1. Enhance Technological Integration: Institutions should incorporate advanced technologies such as AI, big data analytics, and digital platforms into quality assurance systems to improve efficiency and decision-making.
2. Promote Industry Collaboration: Universities should strengthen partnerships with industries to align curricula and research with market needs and provide students with practical training opportunities.
3. Focus on Internationalization: Policymakers and institutions should prioritize obtaining international accreditations and establishing global partnerships to enhance competitiveness and attract international students and faculty.
4. Develop Flexible Quality Assurance Models: To reflect the unique nature of new-generation universities, tailored evaluation frameworks that accommodate interdisciplinary programs and innovative teaching methods should be adopted.
5. Strengthen Stakeholder Engagement: Universities should actively involve students, faculty, and external stakeholders in quality assurance processes to ensure that practices meet the needs of all participants and societal demands.

Limitations

While the study provides a robust analysis of quality assurance systems, its reliance on a qualitative literature review limits the empirical validation of findings. The research focuses primarily on the Turkish higher education system, which may restrict the generalizability of its conclusions to other contexts. Additionally, the study does not include primary data from stakeholders such as students, faculty, or administrators, which could enrich the insights provided.

Future Research Directions

Future studies should explore the implementation effectiveness of quality assurance systems in diverse higher education contexts, using quantitative and mixed-method approaches. Investigating the direct impact of these systems on innovation capacity, graduate employability, and institutional sustainability would provide deeper insights. Comparative studies across different countries and cultural settings could also illuminate best practices for aligning quality assurance with global standards while accommodating local nuances.

Practical Implications

The study offers actionable strategies for enhancing quality assurance practices for higher education institutions. Institutions should integrate advanced technologies into their quality frameworks, adopt

flexible evaluation methods for interdisciplinary programs, and establish stronger collaborations with industry to align educational outcomes with societal needs. Policymakers should prioritize international accreditation and support capacity-building initiatives to enable universities to compete globally.

In a rapidly evolving academic and technological landscape, the role of quality assurance systems is more critical than ever. Higher education institutions must embrace innovation and adaptability to meet the challenges of the 21st century. By fostering a culture of continuous improvement and leveraging the insights provided in this study, universities can position themselves as leaders in shaping the future of education. Policymakers, administrators, and educators are called upon to implement these strategies collaboratively, ensuring that quality assurance systems safeguard educational standards and drive transformative change across the higher education sector.

References

Aithal, P. S., Prabhu, S., & Aithal, S. (2024). Future of Higher Education through Technology Prediction and Forecasting (SSRN Scholarly Paper 4901474). Social Science Research Network. https://doi.org/10.2139/ssrn.4901474.

Albloushi, B., Alharmoodi, A., Jabeen, F., Mehmood, K., & Farouk, S. (2023). Total quality management practices and corporate sustainable development in manufacturing companies: the mediating role of green innovation. Management Research Review, 46(1). https://doi.org/10.1108/MRR-03-2021-0194.

Al-Jumaili, A. H. A., Muniyandi, R. C., Hasan, M. K., Paw, J. K. S., & Singh, M. J. (2023). Big Data Analytics Using Cloud Computing Based Frameworks for Power Management Systems: Status, Constraints, and Future Recommendations. In Sensors (Vol. 23, Issue 6). https://doi.org/10.3390/s23062952.

Al-Zoubi, Z., Qablan, A., Issa, H. B., Bataineh, O., & Al Kaabi, A. M. (2023). The Degree of Implementation of Total Quality Management in Universities and Its Relationship to the Level of Community Service from the Perspectives of Faculty Members. Sustainability, 15(3), Article 3. https://doi.org/10.3390/su15032404.

Almurayh, A., Saeed, S., Aldhafferi, N., Alqahtani, A., & Saqib, M. (2022). Sustainable Education Quality Improvement Using Academic Accreditation: Findings from a University in Saudi Arabia. Sustainability (Switzerland), 14(24). https://doi.org/10.3390/su142416968.

Altbach, P. G., & De Wit, H. (2018). The challenge to higher education internationalization. Studies in Higher Education, 42(5), 887–900.

Amaral, E., & Norcini, J. (2023). Quality assurance in health professions education: Role of accreditation and licensure. Medical Education, 57(1). https://doi.org/10.1111/medu.14880.

Andreani, M., Russo, D., Salini, S., & Turri, M. (2020). Shadows over accreditation in higher education: some quantitative evidence. Higher Education, 79(4). https://doi.org/10.1007/s10734-019-00432-1.

Asif, M., & Raouf, A. (2013). Setting the course for quality assurance in higher education. Quality and Quantity, 47(4). https://doi.org/10.1007/s11135-011-9639-2.

Aydoğdu, M. (2023). Kalite Güvencesi Sistemi: Trakya Üniversitesi İyi Uygulama Örnekleri. Kalite ve Strateji Yönetimi Dergisi, 3(1). https://doi.org/10.56682/ksydergi.1243209.

Batoon, N. P. (2022). Assessment of Quality Assurance Implementation: Valuation and Impact of the Accrediting Agency of Chartered Colleges and Universities in the Philippines (AACCUP) Accreditation. CEMJP, 30(4), Article 4.

Bednarski, M. (2024). Digitalization of the university and its stakes–digital materalities, organology and academic practices. Educational Philosophy and Theory, 56(7). https://doi.org/10.1080/00131857.2024.2320193.

Bondzi–Simpson, P. E., & Agomor, K. S. (2021). Financing Public Universities in Ghana Through Strategic Agility: Lessons from Ghana Institute of Management and Public Administration (GIMPA). Global Journal of Flexible Systems Management, 22(1). https://doi.org/10.1007/s40171-020-00254-6.

Büyükgüzel, K., Keleş, V., & Çelik, C. (2023). Bölgesel Kalkınmadan Uluslararasılaşmaya Doğru Üniversite Uygulama ve Araştırma Merkezlerinin Genel Durumu: Araştırma ve Yenilik Stratejilerinde Kalite Güvence Sisteminin Geliştirilmesi. Üniversite Araştırmaları Dergisi, 6(3). https://doi.org/10.32329/uad.1335796.

Carayannis, E. G., & Morawska-Jancelewicz, J. (2022). The Futures of Europe: Society 5.0 and Industry 5.0 as Driving Forces of Future Universities. Journal of the Knowledge Economy, 13(4). https://doi.org/10.1007/s13132-021-00854-2.

Castro Benavides, L. M., Tamayo Arias, J. A., Arango Serna, M. D., Branch Bedoya, J. W., & Burgos, D. (2020). Digital Transformation in Higher Education Institutions: A Systematic Literature Review. In Sensors (Basel, Switzerland) (Vol. 20, Issue 11). https://doi.org/10.3390/s20113291.

Chankseliani, M., Qoraboyev, I., & Gimranova, D. (2021). Higher education contributing to local, national, and global development: new empirical and conceptual insights. Higher Education, 81(1). https://doi.org/10.1007/s10734-020-00565-8.

Cheah, L. F., Cheng, M. Y., & Hen, K. W. (2023). The effect of quality management practices on academics' innovative performance in Malaysian higher education institutions. Studies in Higher Education, 48(4). https://doi.org/10.1080/03075079.2022.2160702.

Cirella, S., & Murphy, S. (2022). Exploring intermediary practices of collaboration in university–industry innovation: A practice theory approach. Creativity and Innovation Management, 31(2). https://doi.org/10.1111/caim.12491.

de Wit, H., & Altbach, P. G. (2021). Internationalization in higher education: Global trends and recommendations for its future. Policy Reviews in Higher Education, 5(1), 28–46. https://doi.org/10.1080/23322969.2020.1820898.

Di Nauta, P., Iannuzzi, E., Milone, M., & Nigro, C. (2020). The impact of the sustainability principles on the strategic planning and reporting of universities. An exploratory study on a qualified Italian sample. Sustainability (Switzerland), 12(18). https://doi.org/10.3390/su12187269.

Duarte, N., & Vardasca, R. (2023). Literature Review of Accreditation Systems in Higher Education. In Education Sciences (Vol. 13, Issue 6). https://doi.org/10.3390/educsci13060582.

Gamage, K. A. A., Pradeep, R. G. G. R., Najdanovic-Visak, V., & Gunawardhana, N. (2020). Academic Standards and Quality Assurance: The Impact of COVID-19 on University Degree Programs. Sustainability, 12(23), Article 23. https://doi.org/10.3390/su122310032.

Gaston, P. L., & Ochoa, E. M. (2023). Higher Education Accreditation: How It's Changing, Why It Must. In Higher Education Accreditation: How It's Changing, Why It Must. https://doi.org/10.4324/9781003445074.

Gerdsri, N., & Manotungvorapun, N. (2022). Systemizing the Management of University-Industry Collaboration: Assessment and Roadmapping. IEEE Transactions on Engineering Management, 69(1). https://doi.org/10.1109/TEM.2021.3077447.

Gora, A. A., Ştefan, S. C., Popa, Ş. C., & Albu, C. F. (2019). Students' perspective on quality assurance in higher education in the context of sustainability: A PLS-SEM approach. Sustainability (Switzerland), 11(17). https://doi.org/10.3390/su11174793.

Guo, P., Saab, N., Post, L. S., & Admiraal, W. (2020). A review of project-based learning in higher education: Student outcomes and measures. International Journal of Educational Research, 102, 101586. https://doi.org/10.1016/j.ijer.2020.101586.

Hailikari, T., Virtanen, V., Vesalainen, M., & Postareff, L. (2022). Student perspectives on how different elements of constructive alignment support active learning. Active Learning in Higher Education, 23(3). https://doi.org/10.1177/1469787421989160.

Haverila, M., Haverila, K., McLaughlin, C., & Arora, M. (2021). Towards a comprehensive student satisfaction model. International Journal of Management Education, 19(3). https://doi.org/10.1016/j.ijme.2021.100558.

Hazelkorn, E. (2019). Global rankings and the geopolitics of higher education: Understanding the influence and impact of rankings on higher education, policy, and society. Routledge.

Hernandez-Diaz, P. M., Polanco, J. A., & Castaño, S. M. (2020). Do sustainability practices influence university quality? A Colombian case study. International Journal of Sustainability in Higher Education, 21(7). https://doi.org/10.1108/IJSHE-03-2020-0087.

Horta, H., & Santos, J. M. (2020). Organisational factors and academic research agendas: an analysis of academics in the social sciences. Studies in Higher Education, 45(12). https://doi.org/10.1080/03075079.2019.1612351.

Jackson, D., Riebe, L., Meek, S., Ogilvie, M., Kuilboer, A., Murphy, L., Collins, N., Lynch, K., & Brock, M. (2023). Using an industry-aligned capabilities framework to effectively assess student performance in non-accredited work-integrated learning contexts. Teaching in Higher Education, 28(4). https://doi.org/10.1080/13562517.2020.1863348.

Jackson, D., & Rowe, A. (2023). Impact of work-integrated learning and co-curricular activities on graduate labour force outcomes. Studies in Higher Education, 48(3). https://doi.org/10.1080/03075079.2022.2145465.

Jackson, D., & Tomlinson, M. (2022). The relative importance of work experience, extra-curricular and university-based activities on student employability. Higher Education Research and Development, 41(4). https://doi.org/10.1080/07294360.2021.1901663.

Javed, Y., & Alenezi, M. (2023). A Case Study on Sustainable Quality Assurance in Higher Education. Sustainability (Switzerland), 15(10). https://doi.org/10.3390/su15108136.

Jayanti, N. K. D. A., & Sarja, N. L. A. K. Y. (2019). IT as a Tools: Quality Assurance System in Higher Education. 2019 1st International Conference on Cybernetics and Intelligent System, ICORIS 2019. https://doi.org/10.1109/ICORIS.2019.8874890.

Jiménez-Bucarey, C., Acevedo-Duque, Á., Müller-Pérez, S., Aguilar-Gallardo, L., Mora-Moscoso, M., & Vargas, E. C. (2021). Student's satisfaction of the quality of online learning in higher education: An empirical study. Sustainability (Switzerland), 13(21). https://doi.org/10.3390/su132111960.

Jingura, R. M., & Kamusoko, R. (2019). A competency framework for internal quality assurance in higher education. International Journal of Management in Education, 13(2). https://doi.org/10.1504/IJMIE.2019.098186.

Kadhila, N., & Iipumbu, N. (2019). Strengthening internal quality assurance as a lever for enhancing student learning experiences and academic success: lessons from Namibia. Quality in Higher Education, 25(1). https://doi.org/10.1080/13538322.2019.1597424.

Kır, Ş. (2020). Dijital dönüşüm sürecinde yükseköğretim kurumları ve öğretim elemanlarının gelişen rolleri. In Açıköğretim Uygulamaları ve Araştırmaları Dergisi, 6(3).

Lapteva, A. V., Efimov, V. S., Лаптева, А. В., & Ефимов, В. С. (2016). New Generation of Universities. University 4.0. https://elib.sfu-kras.ru/handle/2311/29969.

Li, H., & Yin, Z. (2023). Influence of publication on university ranking: Citation, collaboration, and level of interdisciplinary research. Journal of Librarianship and Information Science, 55(3). https://doi.org/10.1177/09610006221106178.

Liu, H. C., Liu, R., Gu, X., & Yang, M. (2023). From total quality management to Quality 4.0: A systematic literature review and future research agenda. In Frontiers of Engineering Management (Vol. 10, Issue 2). https://doi.org/10.1007/s42524-022-0243-z.

López, D. A., Espinoza, O., Rojas, M. J., & Crovetto, M. (2022). External evaluation of university quality in Chile: an overview. In Quality Assurance in Education (Vol. 30, Issue 3). https://doi.org/10.1108/QAE-08-2021-0141.

Lucander, H., & Christersson, C. (2020). Engagement for quality development in higher education: a process for quality assurance of assessment. Quality in Higher Education, 26(2). https://doi.org/10.1080/13538322.2020.1761008.

Lundberg, H., & Öberg, C. (2021). Teachers, researchers, but not innovators? Rethinking university-industry collaboration. Journal of Business and Industrial Marketing, 36(13). https://doi.org/10.1108/JBIM-03-2020-0126.

M. Ghoneim Sywelem, M., & Mohamed Elsayed Makhlouf, A. (2023). Common Challenges of Strategic Planning for Higher Education in Egypt. American Journal of Educational Research, 11(6). https://doi.org/10.12691/education-11-6-12.

Makki, A. A., Alqahtani, A. Y., Abdulaal, R. M. S., & Madbouly, A. I. (2023). A Novel Strategic Approach to Evaluating Higher Education Quality Standards in University Colleges Using Multi-Criteria Decision-Making. Education Sciences, 13(6). https://doi.org/10.3390/educsci13060577.

Manotungvorapun, N., & Gerdsri, N. (2021). University-industry collaboration: Assessing the matching quality between companies and academic partners. IEEE Transactions on Engineering Management, 68(5). https://doi.org/10.1109/TEM.2019.2910154.

Marrucci, L., Daddi, T., & Iraldo, F. (2024). Creating environmental performance indicators to assess corporate sustainability and reward employees. Ecological Indicators, 158. https://doi.org/10.1016/j.ecolind.2023.111489.

Mattos, L. K. de, Flach, L., Costa, A. M., & Moré, R. P. O. (2023). Effectiveness and Sustainability Indicators in Higher Education Management. Sustainability (Switzerland), 15(1). https://doi.org/10.3390/su15010298.

Medne, A., Lapina, I., & Zeps, A. (2020). Sustainability of a university's quality system: adaptation of the EFQM excellence model. International Journal of Quality and Service Sciences, 12(1). https://doi.org/10.1108/IJQSS-09-2019-0108.

Miotto, G., Del-Castillo-Feito, C., & Blanco-González, A. (2020). Reputation and legitimacy: Key factors for Higher Education Institutions' sustained competitive advantage. Journal of Business Research, 112. https://doi.org/10.1016/j.jbusres.2019.11.076.

Mohamed Hashim, M. A., Tlemsani, I., & Matthews, R. (2022). Higher education strategy in digital transformation. Education and Information Technologies, 27(3), 3171–3195. https://doi.org/10.1007/s10639-021-10739-1.

Moscardini, A. O., Strachan, R., & Vlasova, T. (2022). The role of universities in modern society. Studies in Higher Education, 47(4). https://doi.org/10.1080/03075079.2020.1807493.

Mulenga, I. M. (2020). Rethinking Quality Assurance in Curriculum Development and Implementation for Higher Education in Africa. East African Journal of Education and Social Sciences, 1(3), Article 3. https://doi.org/10.46606/eajess2020v01i03.0039.

My Nguyen, L. T., Tran, T., van Pham, T., Nguyen, T. T., Thu Le, H. T., Phuong Trinh, T. T., & Nghiem, T. T. (2021). Factors affecting successful quality assurance implementation in Vietnamese higher education: A qualitative study. Qualitative Report, 26(2). https://doi.org/10.46743/2160-3715/2021.4564.

Nsanzumuhire, S. U., & Groot, W. (2020). Context perspective on University-Industry Collaboration processes: A systematic review of literature. Journal of Cleaner Production, 258. https://doi.org/10.1016/j.jclepro.2020.120861.

Pedro, N. S., & Kumar, S. (2020). Institutional Support for Online Teaching in Quality Assurance Frameworks. Online Learning, 24(3), 50–66.

Poliakova, H. A. (2018). Conceptual Foundations and Technology of The Formation of The Internal Quality Assurance System in The Higher Education Institution. Adaptive Management: Theory and Practice. Series Pedagogics, 5(9), Article 9. https://amtp.org.ua/index.php/journal/article/view/73.

Rahhali, M., Oughdir, L., & Jedidi, Y. (2021). E-Learning Recommendation System for Big Data Based on Cloud Computing. International Journal of Emerging Technologies in Learning, 16(21). https://doi.org/10.3991/ijet.v16i21.25191.

Rella, A., Rubino, M., Raimo, N., & Vitolla, F. (2024). Does the digitalization of municipalities affect the efficiency of universities? An Italian case study using DEA and Malmquist index approaches. Technology in Society, 77. https://doi.org/10.1016/j.techsoc.2024.102506.

Rodriguez-Salvador, M., & Castillo-Valdez, P. F. (2023). Promoting Collaborative Learning in Students Soon to Graduate through a Teaching–Learning Model. Education Sciences, 13(10). https://doi.org/10.3390/educsci13100995.

Rohman, F., Noermijati, N., Mugiono, M., & Soelton, M. (2023). The role of quality assurance in improving the distribution of organizational performance. Uncertain Supply Chain Management, 11(1). https://doi.org/10.5267/j.uscm.2022.10.003.

Romanowski, M. H. (2022). The idolatry of accreditation in higher education: enhancing our understanding. Quality in Higher Education, 28(2). https://doi.org/10.1080/13538322.2021.1948460.

Rosak-Szyrocka, J. (2024). The Era of Digitalization in Education where do Universities 4.0 Go? Management Systems in Production Engineering, 32(1). https://doi.org/10.2478/mspe-2024-0006.

Rosienkiewicz, M., Helman, J., Cholewa, M., Molasy, M., Górecka, A., Kohen-Vacs, D., Winokur, M., Amador Nelke, S., Levi, A., Gómez-González, J. F., Bourgain, M., Sagar, A., Berselli, G., & Benis, A. (2024). Enhancing Technology-Focused Entrepreneurship in Higher Education Institutions Ecosystem: Implementing Innovation Models in International Projects. Education Sciences, 14(7), Article 7. https://doi.org/10.3390/educsci14070797.

Ruben, B. D., De Lisi, R., & Gigliotti, R. A. (2023). A Guide for Leaders In Higher Education: Concepts, Competencies, and Tools. In A Guide for Leaders in Higher Education: Concepts, Competencies, and Tools. https://doi.org/10.4324/9781003442769.

Rybinski, K. (2022). Assessing how QAA accreditation reflects student experience. Higher Education Research and Development, 41(3). https://doi.org/10.1080/07294360.2021.1872058.

Saroyan, A., & Frenay, M. (2023). Building Teaching Capacities in Higher Education: A Comprehensive International Model. In Building Teaching Capacities in Higher Education: A Comprehensive International Model. https://doi.org/10.4324/9781003443346.

Sayah, H., & Khaleel, A. (2022). The Application of Accreditation Standards Institutional Iraqi in Iraqi Universities Using Deming Cycle (Pdsa)" an Applied Study in The Colleges of Sumer University -Iraq". Proceedings on Engineering Sciences, 4. https://doi.org/10.24874/PES04.01.004.

Schofer, E., Ramirez, F. O., & Meyer, J. W. (2021). The Societal Consequences of Higher Education. Sociology of Education, 94(1). https://doi.org/10.1177/0038040720942912.

Şendur Atabek, G. (2023). Türkiye'de İletişim Eğitimi Alanında Akreditasyon Süreci. Akdeniz Üniversitesi İletişim Fakültesi Dergisi, 42. https://doi.org/10.31123/akil.1322584.

Sharvashidze, G., Grdzelidze, I., Sikharulidze, D., & Gabrichidze, T. (2023). Data-driven analysis for evidence-based decision making at universities: benchmarking, software tools and weighted indicators in quality assurance–analytical framework of Tbilisi State University. Quality in Higher Education, 29(1). https://doi.org/10.1080/13538322.2022.2122107.

Spowart, L., & Turner, R. (2022). Institutional Accreditation and the Professionalisation of Teaching in the HE Sector. In Higher Education - New Approaches to Accreditation, Digitalization, and Globalization in the Age of Covid. https://doi.org/10.5772/intechopen.99805.

Stukalo, N., & Lytvyn, M. (2021). Towards sustainable development through higher education quality assurance. Education Sciences, 11(11). https://doi.org/10.3390/educsci11110664.

Suparno, Sri Pudjiarti, E., & Joyo Supeno, B. (2023). Collaborative Synergy: Leveraging Competitive Advantage in University-Industry Innovation. Interciencia. https://doi.org/10.59671/bfsog.

Suresh Kumar, P. M. (2017). Academic Audit and Quality Assurance in Higher Education. International Journal of Management, Technology, and Social Sciences. https://doi.org/10.47992/ijmts.2581.6012.0025.

Taşcı, D., & Lapçın, H. T. (2023). Yükseköğretimde Kalite Güvencesi Sistemi: Kurumsal Akreditasyon Raporları Üzerinden Bir Değerlendirme. Eskişehir Osmangazi Üniversitesi Sosyal Bilimler Dergisi, 24(1). https://doi.org/10.17494/ogusbd.1185953.

Teichler, U. (2020). Higher education and the world of work: A conceptual framework. European Journal of Education, 55(1), 3–17.

Tien, N. H., Duc, L. D. M., Ngoc, N. M., & Hieu, V. M. (2022). Impact of Accreditation Policy on Quality Assurance Activities of Public and Private Universities in Vietnam. International Journal of Public Sector Performance Management, 1(1). https://doi.org/10.1504/ijpspm.2022.10052573.

Tseng, F. C., Huang, M. H., & Chen, D. Z. (2020). Factors of university–industry collaboration affecting university innovation performance. Journal of Technology Transfer, 45(2). https://doi.org/10.1007/s10961-018-9656-6.

Vivek, C. M., & Ramkumar, P. (2021). Evaluation of course outcome attainment of engineering course with traditional, blended and flipped classroom approaches. Education and Information Technologies, 26(2). https://doi.org/10.1007/s10639-020-10353-7.

Vykydal, D., Folta, M., & Nenadál, J. (2020). A study of quality assessment in higher education within the context of sustainable development: A case study from Czech Republic. Sustainability (Switzerland), 12(11). https://doi.org/10.3390/su12114769.

Wong, W. H., & Chapman, E. (2023). Student satisfaction and interaction in higher education. Higher Education, 85(5). https://doi.org/10.1007/s10734-022-00874-0.

Yıldırım, Z., & Çatı, K. (2023). Hizmet Kalitesinin Öğrenci Memnuniyetine Olan Etkisinde Kurum İmajının Aracılık Rolü. Munzur Üniversitesi Sosyal Bilimler Dergisi, 12(2). https://doi.org/10.61337/tusbd.1338237.

Yin, L. (2024). Educational Administration in Chinese Universities in the Context of Globalization. Frontiers in Economics and Management, 5(2), 57–62. https://doi.org/10.6981/FEM.202402_5(2).0008.

Zaid, A., Arqawi, S., Abu Mwais, R., Al Shobaki, M., & Abu-Naser, S. (2020). The Impact of Total Quality Management and Perceived Service Quality on Patient Satisfaction and Behavior Intention in Palestinian Healthcare Organizations. Technology Reports of Kansai University, 62, 221–232.

Zuhairi, A., Raymundo, M. R. D. R., & Mir, K. (2020). Implementing quality assurance system for open and distance learning in three Asian open universities: Philippines, Indonesia and Pakistan. Asian Association of Open Universities Journal, 15(3), 297–320. https://doi.org/10.1108/AAOUJ-05-2020-0034.

---o---o---o--- Article Notes ---o---o---o---

The authors of the study declared the following points within the framework of the "COPE-Code of Conduct and Best Practices Guidelines for Journal Editors"

Funding: No funding was received from any institution or organisation for this study.

Acknowledgement: A different version of this article was presented at IHEC 2024.

Ethical Clearance: The authors received approval from their institutions.

Author Contributions: The authors contributed to the research equally.

Declaration of Conflicting Interests: The authors have no potential conflict of interest regarding research, authorship, or publication of this article.