

State-Centric Governance in Algerian Universities: Challenges and Reform Pathways**Djegta Sana**

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Abstract:

This study analyses the structural constraints of Algeria's state-centric university governance model using a comparative descriptive approach. It identifies core challenges—bureaucratic rigidity, constrained institutional autonomy, and insufficient digital infrastructure—that undermine educational quality and graduate employability. By examining international governance models such as shared and network governance, the study proposes reform pathways focused on decentralization, stakeholder engagement, and the integration of digital tools, including artificial intelligence (AI) and open educational resources (OER). These reforms aim to enhance institutional responsiveness and align Algeria's higher education system with global standards. The findings provide practical recommendations for policymakers and contribute to governance reform discourse in the MENA region

Keywords: Higher Education; Algeria; Digital Transformation; State-Centric Model; University Governance.

Jel Classification Codes : I23, I28 .

ملخص:

في هذه الدراسة، يتم تحليل القيود الهيكلية التي يفرضها نموذج الحوكمة الجامعية المركزي في الجزائر، وذلك باستخدام منهج وصفي مقارنة. وسلط الضوء على التحديات الأساسية مثل الجمود البيروقراطي، وتقييد الاستقلالية المؤسسية، وضعف البنية التحتية الرقمية، والتي تؤثر سلباً على جودة التعليم وقابلية توظيف الخريجين. من خلال دراسة نماذج الحوكمة الدولية كالحوكمة التشاركية والشبكية، تقترح الدراسة مسارات إصلاح تركز على اللامركزية، وإشراك الأطراف الفاعلة، ودمج الأدوات الرقمية بما في ذلك الذكاء الاصطناعي (AI) والمصادر التعليمية المفتوحة (OER). تهدف هذه الإصلاحات إلى تعزيز قدرة المؤسسات على الاستجابة وتحقيق التوافق بين نظام التعليم العالي الجزائري والمعايير العالمية. وتقدم النتائج توصيات عملية لصانعي السياسات وتسهم في إثراء نقاش إصلاح الحوكمة في منطقة الشرق الأوسط وشمال إفريقيا.

الكلمات المفتاح: التعليم العالي؛ الجزائر؛ التحول الرقمي؛ النموذج المركزي؛ حوكمة الجامعات.

تصنيف JEL: I23؛ I28

I. Introduction :

Universities worldwide face unprecedented challenges, including the massification of higher education—with current global enrollment estimated at approximately 254 million students—stagnating or declining public funding, and the urgent need for digital transformation (UNESCO, 2025; World Bank, 2020). These issues are particularly pronounced in developing nations, where higher education systems struggle to balance quality, accessibility, and relevance to labor market demands. In the Middle East and North Africa (MENA) region, high youth unemployment (24.5% in 2024) (ILO, 2024), limited institutional autonomy, and inadequate digital infrastructure hinder universities' contributions to economic and social progress (World Bank, 2021; World Bank, 2023).

Algeria epitomizes these regional challenges, with its rapidly expanding higher education sector serving over 1.53 million students across 117 institutions (MESRS). Governed by a state-centric model, the system is characterized by centralized control, low stakeholder engagement, and restricted administrative and financial autonomy (World Bank, 2024). This governance structure has led to persistent challenges, including a 12.7% graduate unemployment rate, low research output (0.56% of GDP), and slow adoption of digital tools, with a limited number of operational e-learning platforms (MESRS; Statista, 2025).

These inefficiencies limit universities' ability to adapt to global trends, such as the integration of artificial intelligence (AI) and open education platforms, and to meet societal expectations.

This study examines the limitations of Algeria's state-centric governance model, which constrains innovation and flexibility in a rapidly evolving global educational landscape. It addresses three research questions:

1. To what extent does the governance of Algerian universities align with international standards and practices?
2. What are the main challenges that hinder the effectiveness of the higher education governance system in Algeria?
3. What reforms are needed to enhance governance in response to global trends and digital transformation?

By evaluating Algeria's system, analysing global governance models, and proposing policy reforms, this study aims to enhance university performance and align higher education with the knowledge economy. It contributes to the literature by providing a context-specific analysis of a MENA country, offering insights for policymakers in Algeria and similar contexts. The paper is structured as follows: Section 2 reviews the literature, Section 3 outlines the methodology, Section 4 presents a conceptual framework, Section 5 compares global governance models, Section 6 analyses Algerian governance, Section 7 discusses the findings, and Section 8 offers conclusions and recommendations.

II. Literature Review:

The literature on university governance highlights diverse models and evolving challenges. Global studies emphasize the impacts of globalization, digitalization, and financial constraints. Marginson, Callender, and Locke (2020) emphasize the need for adaptable governance in a rapidly changing global higher education environment. MOOCs, as discussed by Laurillard & Kennedy (2020), enhance access but require robust digital infrastructure. Separately, Marginson (2011) consistently argue that greater institutional autonomy leads to better educational quality, and that centralized control often stifles responsiveness and innovation. Huisman and Huang (2022) advocate for network governance, emphasizing inter-university collaboration to address resource constraints. Gkrimpizi et al. (2023) identify faculty resistance and inadequate infrastructure as significant challenges to digital transformation, particularly in developing countries. Dobbins et al. (2011) categorize governance models into state-centric, market-oriented, and academic types, linking greater institutional autonomy to improved educational and research outcomes.

Regional studies on higher education in the Arab world reflect challenges similar to those identified in the global literature. Samah (2017) critiques Algeria's centralized governance model, linking it to high graduate unemployment and insufficient investment in research. Ghrissi (2022)

highlights the potential of digital platforms in Algerian universities, but notes persistent structural challenges—particularly inadequate infrastructure and insufficient staff training—that limit their effective deployment. Akkari (2021) examines the influence of globalization and privatization on higher education systems in Arab countries, arguing that quantitative expansion without structural governance reform contributes to rising graduate unemployment and institutional stagnation. Abu-Orabi, Al-Zoubi, and Aladwan (2020) analyze the status of scientific research in Arab universities, attributing low research productivity and underemployment among graduates to entrenched bureaucracy and the absence of effective governance reforms. Badran (2018) critiques the lack of transparency in governance practices and highlights the persistent gap between academic programs and labor market needs, calling for participatory governance models to improve program relevance and graduate employability. Finally, Waterbury (2019) emphasizes the urgent need for governance reforms to improve the quality and relevance of higher education in the region, particularly through increased institutional autonomy and stronger accountability mechanisms. El Amine (2019) contributes to the understanding of governance challenges in the Arab region by highlighting the cultural and institutional resistance rooted in post-independence state-building traditions. He argues that higher education in many Arab countries remains under rigid bureaucratic control, with limited willingness among policymakers to support decentralization or grant universities greater autonomy. According to El Amine (2019), the very notion of “governance” is often misunderstood or absent from institutional discourse. Tunisia is presented as a relative exception, where political and cultural shifts have facilitated more open discussions about institutional autonomy and reform, in contrast to more stagnant systems in neighboring countries.

These studies collectively reveal a set of structural challenges facing higher education systems across the Arab region, including bureaucratic rigidity, digital divides, limited institutional autonomy, and a persistent disconnect between educational outcomes and labor market demands. However, much of the existing literature lacks in-depth comparative analysis between regional governance models and global theoretical frameworks. This study aims to bridge that gap by integrating global governance theories into the specific context of Algeria, with a particular focus on digital transformation, artificial intelligence, and innovative models such as shared and networked governance. By proposing reforms tailored to Algeria’s socio-economic and technological conditions, the study contributes to a more comprehensive and context-sensitive understanding of university governance in developing settings.

III. Methodology :

This study adopts a comparative descriptive approach to analyse Algerian university governance with international models. This method was selected for its ability to facilitate an in-depth comparison of governance frameworks and identify areas for improvement. Due to the scarcity of recent primary data on Algerian governance, the study relies on secondary data from international databases (World Bank, 2021, 2020), official reports (MESRS; UNESCO, 2025), and scholarly literature (e.g., Dobbins et al., 2011; Ghrissi, 2022).

Global governance models—academic, market-oriented, corporate, shared, network, and state-centric—were selected based on their prevalence in the literature and relevance to Algeria’s context. These models were evaluated using criteria such as stakeholder involvement, institutional autonomy, quality impact, and digital integration, which directly influence university performance and align with global trends. The analysis followed three steps:

Classifying Global Models: Drawing on scholarly literature to understand how models function across contexts.

Analyzing the Algerian Model: Using statistical data, policy documents, and historical trends to assess strengths and weaknesses.

Synthesizing Results: Combining insights from global models with regional challenges to propose context-specific reforms.

Limitations include the reliance on secondary data, which may introduce biases due to inconsistent reporting or outdated information. To mitigate these, multiple sources were cross-referenced for accuracy.

IV. Conceptual University Governance Framework :

a) Definition :

University governance encompasses the structures, policies, and processes that guide institutional decision-making, resource allocation, and performance evaluation. The American Association of University Professors (AAUP, 2021) defines shared governance as a collaborative responsibility among governing boards, faculty, and administration, emphasizing inclusivity. Academic governance focuses on standards and quality, while executive governance oversees financial and administrative operations (Advance HE, n.d.). Huisman and Huang (2022) highlight how governmental roles influence autonomy in financial, academic, and organizational domains. This study defines university governance as "the structures, policies, and processes that guide decision-making, resource allocation, and performance evaluation, fostering stakeholder participation and institutional autonomy."

b) Governance Theories in Higher Education :

This framework is anchored in two foundational theories that provide critical insights into effective governance structures for higher education institutions: Stakeholder Theory and New Public Management (NPM). These theories offer a robust lens through which to analyze and address the challenges of university governance, particularly in contexts characterized by centralized control like Algeria.

Stakeholder Theory, as articulated by Freeman and colleagues (2010), posits that organizations must engage all stakeholders—defined as any group affected by institutional activities—rather than privileging a single dominant actor. In higher education, stakeholders include faculty, students, administrators, policymakers, alumni, employers, and local communities. This theory advocates inclusive, participatory governance that ensures institutional decisions reflect diverse perspectives and enhance legitimacy. Empirical evidence from the Maghreb shows that while stakeholder inclusion has progressed in Morocco and Tunisia, Algeria maintains a highly centralized governance structure, where state representatives dominate university boards (Benjelloun, 2020). The limited autonomy of Algerian universities underscores the need to institutionalize broader stakeholder participation to align programs with labor market needs and boost graduate employability.

Trowler (2010) further supports this argument by emphasizing the significance of student engagement in institutional governance. Inclusive models that integrate student voices are more likely to yield responsive and socially legitimate outcomes—particularly critical in addressing demands for quality education and accountability.

In parallel, **New Public Management (NPM)**, as introduced by Hood (1991), proposes a shift from bureaucratic control to performance-based, decentralized governance in public institutions. NPM principles emphasize autonomy, output evaluation, and market-oriented responsiveness. These approaches have successfully redefined university governance models in many countries by fostering institutional independence and innovation (Liang, 2024). In Algeria, where higher education remains state-driven and hierarchically managed, NPM offers a reformative pathway by promoting efficiency, flexible resource allocation, and accountability frameworks based on institutional performance.

Moreover, governance studies specific to Algeria affirm that internal dysfunction, rigidity, and corruption are symptoms of deficient governance models that lack strategic vision and institutional integrity (Benrami & Boukhari, 2025). Enhancing academic autonomy, decentralizing decision-making, and anchoring reforms in stakeholder representation and market-informed metrics—core tenets of Stakeholder Theory and NPM—could address these systemic challenges.

c) Modern Governance Concepts and Relevant International Statistics:

Building on the previous discussion, Table 1 presents modern concepts in university governance that contribute to the development of traditional management models and align with global transformations in the higher education sector. Each concept is defined and its direct impact on institutional governance is explained, with a focus on enhancing efficiency, sustainability, adaptability, and inclusive participation in decision-making processes.

Table 1: Key Concepts in University Governance

Concept	Definition	Impact on Governance
Digital Governance	Leveraging technology for decision-making and transparency	Enhances efficiency, reduces delays
Sustainable Governance	Balancing academic, social and environmental goals	Promotes long-term viability
Adaptive Governance	Flexible structures responding to crises	Increases institutional resilience
Inclusive Governance	Prioritizing diversity in decision-making	Strengthens legitimacy and engagement

Effective governance plays a vital role in achieving institutional objectives, improving educational quality, and promoting innovation in higher education. For example, governance reforms in Tunisia, influenced by the Bologna Process, seek to align academic curricula with labor market demands to enhance graduate employability (Khelifi, 2020). Institutional autonomy is widely acknowledged as a key factor in boosting research performance and responsiveness to societal needs (Marginson, 2020; Estermann & Nokkala, 2009). In the MENA region, efforts to adopt digital governance encounter obstacles due to underdeveloped infrastructure, potentially affecting student engagement (Gkrimpizi et al., 2023). In Europe, sustainable governance practices in universities support broader global sustainability goals (Damásio & Matias, 2024). Similarly, in Algeria, governance is essential for tackling systemic challenges, such as bridging digital divides and aligning education with economic priorities

V. Global Models of University Governance :

Table 2, prepared by the researchers based on their expertise and a review of comparative literature, summarizes the **key differences** among six global university governance models in terms of institutional autonomy, stakeholder participation, impact on educational quality, and the degree of digital integration. The table aims to provide a **comparative** analytical overview that reflects the researchers' perspective on the characteristics of each model, offering a foundation for assessing their applicability within the Algerian context.

Table 2: Comparison of University Governance Models

Model	Autonomy	Stakeholder Involvement	Quality Impact	Digital Integration
Academic Governance	High (faculty-led)	Moderate (faculty-focused)	High (research-focused)	Low (varies by institution)
Market-Oriented	High (financial independence)	High (industry-driven)	Moderate (market-focused)	Moderate (technology-driven)
Corporate Governance	Moderate (professional mgmt)	Moderate (board-driven)	High (efficiency-focused)	High (data-driven systems)
Shared Governance	High (collaborative)	High (inclusive)	High (innovation-driven)	High (supports e-platforms)
Network Governance	Moderate (collaborative)	High (global partnerships)	High (resource-sharing)	High (leverages digital tools)
State-Centric	Low (state-controlled)	Low (limited participation)	Low (compliance-driven)	Low (infrastructure gaps)

Note. Data from the authors

Table 3. presents a comparison of six university governance models based on the level of influence exerted by key actors: the government, university administration, faculty, students, and

external stakeholders. It shows that the state-centric model grants the government near-total control, while the academic model emphasizes the role of faculty. The market-oriented and corporate models strengthen administrative authority and are aligned with market responsiveness. In contrast, the shared and network models are characterized by broad participation across most actors, reflecting a shift toward collaborative governance and institutional openness.

Table 3: Main Actors in University Governance Models

<i>Governance Model</i>	<i>Government</i>	<i>University Administration</i>	<i>Faculty</i>	<i>Students</i>	<i>External Stakeholders</i>
<i>State-Centric</i>	High	Low	Low	Low	Low
<i>Academic</i>	Low	Moderate	High	Moderate	Low
<i>Market-Oriented</i>	Low	High	Moderate	Low	High
<i>Corporate</i>	Moderate	High	Low	Low	Moderate
<i>Shared</i>	Low	Moderate	High	High	Moderate
<i>Network</i>	Low	Moderate	High	High	High

Source: Data from the authors

Building on Tables 2 and 3, which highlight the key differences between governance models in terms of influential actors and their levels of involvement, the following section provides a descriptive overview of the six models. This presentation clarifies the distinctive features of each approach and deepens understanding of how governance is practically exercised within higher education institutions around the world.

a. Academic Governance :

Academic governance prioritizes faculty-led decision-making, emphasizing academic freedom and research excellence (Dobbins et al., 2011). While it fosters innovation, it may struggle with administrative efficiency due to its faculty-centric focus.

b. Market-Oriented Governance :

Market-oriented governance aligns universities with industry needs, promoting competition and financial independence (El Amine, 2016). It enhances adaptability but risks prioritizing profit over academic integrity.

c. Corporate Governance :

Corporate governance applies business principles, focusing on professional management and financial accountability (Trakman, 2008). It improves efficiency but may undervalue academic priorities.

d. Shared Governance :

shared governance in higher education refers to a collaborative decision-making process that involves various stakeholders, including students, faculty staff, administrators, and external members. This governance model aims to democratise university governance, fostering greater accountability and transparency. The concept is rooted in the belief that involving diverse perspectives leads to more effective and inclusive policies and practices at the institutional level. (Lo, 2025). It supports digital platforms, improving teaching quality by 19% in adopting institutions (Ghrissi, 2022).

e. Network Governance :

Network governance fosters inter-university collaboration and global partnerships, leveraging digital tools for resource sharing (Huisman & Huang, 2022). It enhances research output but depends on robust infrastructure.

f. State-Centric Governance :

State-centric governance is characterized by centralized control, with governments overseeing policies, curricula, funding, and appointments (El Amine, 2016). It ensures policy coherence but limits institutional independence and innovation.

VI. Governance of Higher Education in Algeria:

Algeria's higher education system, serving over 1.53 million students and employing roughly 68,000 faculty members in 117 institutions, operates under a state-centric governance model characterized by centralized control and limited institutional autonomy (MESRS). This section (a) traces the evolution of key indicators over the past two decades, (b) examines core structural challenges, (c) Recent Reforms and Initiatives. and (d) Comparison with Global Models.

a) Historical Context :

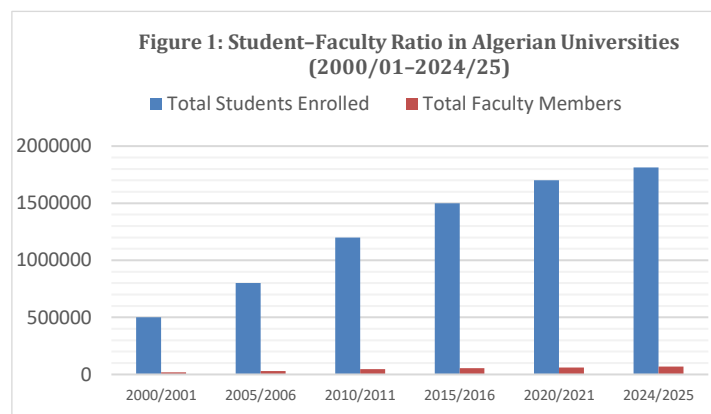
Since independence in 1962, Algeria's higher education system has expanded significantly, growing from 40,000 students to over 1.53 million by 2024 (MESRS). The 1971 reform democratized access, prioritizing enrollment over quality. The 2004 LMD (License-Master-Doctorat) reform aligned curricula with the Bologna Process to enhance global compatibility and graduate employability. However, centralized governance has constrained effectiveness of reform, contributing to a 12.7% graduate unemployment rate and low research output at 0.56% of GDP.

b) Evolution of Core Indicators :

To understand long-term trends, Table 4–5 summarize student enrollment, faculty staffing, and tertiary enrollment rates from 2000 through the most recent data for 2023/2024 and 2024/2025.

Table :4 Student Enrollment, Faculty Numbers, 2000/2001;2024/2025

Academic Year	Total Students Enrolled	Total Faculty Members
2000/2001	500 000	20 000
2005/2006	800 000	30 000
2010/2011	1 200 000	48 000
2015/2016	1 500 000	55 000
2020/2021	1 700 000	60 000
2024/2025	1 812 000	68 000



Source : Data from MESRS.

The slight improvement in the ratio for 2024/2025 reflects recent recruitment to redress past imbalances (MESRS).

Table 5: Tertiary Education Gross Enrollment Rate (% of Eligible Population), 2000–2023

Year	Enrollment Rate (%)
2000	10.5
2005	15.0
2010	30.0
2015	40.0
2020	50.0
2023	55.5

Source: UNESCO Institute for Statistics (2024).

These tables 4, 5 and figure 1, illustrate that while student access to higher education has expanded substantially—enrollment increased from approximately half a million in 2000/2001 to over 1.8 million in 2024/2025—the student-faculty ratio peaked at 28.3:1 in 2020/2021 before showing modest improvement in recent years. Tertiary enrollment reached 55.5 percent in 2023, reflecting growing participation in higher education. However, the graduate unemployment rate

remains concerning at 24.5 percent in 2024, highlighting ongoing challenges in aligning academic programs with labor market needs (UNESCO Institute for Statistics, 2024; World Bank, 2024).

c) Core Structural Challenges :

Building on these trends, the following challenges are rooted in Algeria's state-centric governance:

1. **Bureaucratic Rigidity:** Centralized decision-making by MESRS results in significant delays in curriculum updates and policy implementation. For example, revising an engineering curriculum to include emerging technologies like machine learning can take up months due to multiple approval layers. This contrasts with decentralized systems, such as Canada's, where universities update programs within months to align with industry needs (Clark, 2004). Such delays in Algeria limit responsiveness to labor market demands, particularly in fast-evolving fields like technology and renewable energy.
2. **Funding Constraints:** Although Algeria allocates approximately 6% of its GDP to public education, only a small fraction—reportedly around 10%—is directed toward technology, which remains insufficient to modernize infrastructure or support research and innovation (World Bank, 2020). Universities depend on state funding for over 90% of their budgets, limiting financial autonomy and reducing incentives for public-private partnerships (World Bank, 2024). In contrast, countries like Singapore have invested heavily in higher education, enabling a globally competitive and innovation-driven academic system (Marginson, 2020). In Algeria, constrained funding continues to undermine faculty development, laboratory upgrades, and the adoption of digital tools, thus perpetuating institutional inefficiencies.
3. **Digital Divide** Algeria faces persistent digital infrastructure challenges that significantly limit the effectiveness of e-learning and digital governance initiatives. Common challenges include unreliable internet access, insufficient institutional investment in digital tools, and a lack of faculty training—factors that severely hinder integration of educational technologies (Gkrimpizi et al., 2023). Unlike global leaders such as Finland, where near-universal connectivity supports platforms like Moodle, Algeria's digital divide restricts access to open educational resources (OER) and impedes administrative modernization.
4. **Graduate Unemployment:** According to the World Bank, Algeria's overall unemployment rate reached 12.7 % in 2024 (World Bank, 2024), underscoring the difficulty recent graduates face when entering the labor market. Academic programs in Algerian universities have been critiqued for emphasizing theoretical instruction at the expense of hands-on skill development, a mismatch highlighted by the World Development Report 2019, which notes the rising employer demand for complex problem-solving and adaptability—skills insufficiently cultivated by traditional curricula (World Bank, 2019). Industry partnerships and structured internship opportunities remain limited in Algeria, with university-industry collaboration frameworks underdeveloped compared to regional counterparts (Hojeij, 2024). In contrast, Germany's dual study programs integrate academic education with vocational training and paid workplace experience, ensuring that students alternate between university coursework and on-the-job apprenticeships—a model formally supported by the Bundesinstitut für Berufsbildung (Bundesinstitut für Berufsbildung, 2024).
5. **Low Research Output:** Research investment, at 0.56% of GDP, is among the lowest in MENA, resulting in minimal publications and international recognition (Samah, 2017; Statista, 2025). Faculty face funding shortages and bureaucratic hurdles, discouraging high-impact research. In contrast, South Korea's significant research investment drives global academic influence

(Samah, 2017). The brain drains of talented researchers seeking better opportunities abroad further weakens Algeria's research ecosystem.

6. **Cultural Resistance to Change:** Hierarchical administrative structures and post-independence governance traditions continue to resist reforms such as decentralization and greater institutional autonomy. In Algeria, proposals to grant universities budgetary control are often met with bureaucratic inertia and institutional reluctance, stemming from centralized oversight cultures (Benrami & Boukhari, 2025). In contrast, Tunisia has seen relative success in governance reform, driven by political and cultural shifts that support institutional dialogue and autonomy (El Amine, 2019).

d) Recent Reforms and Initiatives :

Algeria In recent years, has initiated a series of higher education reforms aimed at modernizing governance, enhancing quality, and fostering alignment with international trends. However, critical assessment reveals that these reforms are constrained by enduring structural rigidities, bureaucratic inertia, and cultural resistance, which often dilute their intended impact. In light of these systemic limitations, the following key initiatives merit closer scrutiny:

1. **LMD System (2004):** The Licence-Master-Doctorat (LMD) system reform, introduced to align Algeria's degree system with the Bologna Process and improve international recognition (Benouar, 2013), has faced significant challenges in implementation. While the policy was rolled out nationwide, its uptake has been uneven and largely symbolic in nature. Faculty members were inadequately trained, and the system continues to operate within a centralized framework that hinders curricular innovation. In several disciplines, particularly the humanities, outdated content persists due to prolonged ministerial approval processes. Moreover, the emphasis on credential standardization has not translated into enhanced employability, as university curricula remain detached from labor market realities. This reflects a broader trend of superficial reform driven by form rather than function.

2. **Digital Master Plan (2022–2024):** This national strategy comprises 102 initiatives targeting the expansion of digital infrastructure, the development of e-learning platforms such as ENAD, and digital training for faculty (MESRS, 2024). While visionary in design, the plan has suffered from severe implementation gaps. Only 25% of university courses are delivered online, far below the global average of 60% (UNESCO, 2021). Infrastructure remains uneven, particularly in peripheral regions, and digital literacy among staff is insufficient. Additionally, funding allocation has been inconsistent, leading to delays in platform deployment and underutilization of available technologies. These issues underscore a recurrent challenge in Algerian policy: ambitious planning without adequate resource alignment or decentralized execution capacity.

3. **English Language Instruction:** Since 2022, Algeria has mandated English in schools and encouraged universities to offer English-medium instruction (EMI) to boost global competitiveness (Naimi, 2025). Pilot programs in institutions such as USTHB have demonstrated limited success. However, systemic constraints undermine scalability: faculty with sufficient English proficiency remain scarce, and the transition away from French—the historically dominant language of instruction—has encountered cultural and institutional resistance. Additionally, the absence of comprehensive EMI curriculum frameworks and a lack of didactic resources further challenge this transition. Without a phased, well-resourced, and culturally sensitive implementation strategy, EMI risks increasing pedagogical disparities rather than mitigating them.

4. Capacity-Building Projects: These internationally supported projects like MAGIC and AFREQEN aim to build institutional capacity in governance, accreditation, and curriculum development (SPHERE, 2015). Despite their relevance, their reach remains limited. Participation across universities is uneven, with many institutions constrained by bureaucratic hurdles or lacking the internal motivation to engage. Training outputs are often not institutionalized, leading to fragmented knowledge dissemination and minimal structural change. This highlights a common pattern in Algerian reform dynamics: externally driven initiatives fail to take root when institutional autonomy and ownership are lacking.

5. Research and Innovation Funding: Efforts to boost research include establishing research centers and increasing funding for scientific projects. Although research capacity-building has been a strategic focus, actual progress remains modest. With only 0.56% of GDP allocated to research (Statista, 2025), Algeria lags behind even regional peers. Funding mechanisms are highly centralized and often politicized, favoring short-term or low-impact projects. As a result, high-performing researchers face disincentives to remain within the national system, contributing to a sustained brain drain. Moreover, the absence of competitive grants, weak ties with industry, and lack of performance-based funding undermine the broader ecosystem of innovation. Without a strategic overhaul of research governance and investment logic, efforts to improve output and global ranking will remain superficial.

Across all five reform domains, a common pattern emerges: ambitious national frameworks are undermined by rigid centralization, underinvestment, institutional resistance, and weak feedback mechanisms. Rather than driving systemic transformation, many reforms remain performative anchored more in international signaling than in deep structural change. For reforms to succeed, Algeria must move beyond symbolic alignment with global models and focus instead on operational decentralization, robust capacity-building, and the development of institutional cultures that value autonomy, accountability, and innovation.

e) Comparison with Global Models :

Comparing Algeria's state-centric governance with global models highlights its limitations and potential reform pathways. Each model offers insights into balancing autonomy, stakeholder involvement, and innovation.

1. **Academic Governance:** Faculty-led, like Germany's Humboldt model, offering innovation but lacking efficiency (Dobbins et al., 2011). Unlike Algeria's centralized system, academic governance empowers faculty to shape curricula, fostering research. Algeria could adopt faculty-driven decision-making but needs streamlined administration.
2. **Market-Oriented Governance:** Common in the U.S., prioritizing competition and independence (Convene, 2016). Algeria's public funding ensures equity but limits flexibility. Market-oriented elements like industry partnerships could improve efficiency but risk excluding disadvantaged students.
3. **Corporate Governance:** Seen in Australia, using professional management (Trakman, 2008). Algeria lacks such structures, causing inefficiencies. Corporate principles could enhance accountability but require training and alignment with academic values.
4. **Shared Governance:** Prevalent in Canada, involving stakeholders for inclusivity (Convene, 2023). Algeria's limited participation stifles innovation. Shared governance could align programs with markets but faces cultural resistance.

5. **Network Governance:** Emphasized in Europe's Erasmus program, fostering collaboration (Huisman & Huang, 2022). Algeria's partnerships are limited by language and infrastructure. Network governance could boost research but requires digital and linguistic investments.
6. **State-Centric Governance:** Aligns with developing nations, ensuring coherence but limiting autonomy (El Amine, 2016). Unlike shared or network models, it restricts innovation. Decentralization could enhance flexibility while maintaining oversight.

VII. Future Trends :

Several global trends will shape Algeria's higher education governance, presenting opportunities and challenges:

1. **Digital Transformation:** Expanding digital technologies requires investment in e-learning, connectivity, and training. The Digital Master Plan aims to modernize education, but progress is slow (MESRS). AI tools for retention and administration could enhance efficiency but need infrastructure upgrades.
2. **Internationalization and English Instruction:** The global dominance of English as an academic lingua franca has driven the expansion of English-medium instruction (EMI) programs in non-Anglophone countries. This could attract international students but demands faculty training and curriculum redesign.
3. **Open Education Resources (OER):** Platforms like Coursera offer cost-effective resources. Increasing OER use could address gaps, especially in rural areas, but it depends on connectivity.
4. **Sustainability and Green Initiatives:** Global climate concerns push universities towards sustainability. Algeria could lead in sustainability education, attracting funding, but requires policy integration.
5. **Research Collaboration and Mobility:** Partnerships with European and African universities could boost research. Overcoming language and funding challenges is critical.
6. **Governance Reforms Towards Autonomy:** Trends favor autonomy. Algeria could decentralize budget and curriculum control, requiring legislative and cultural shifts.

VIII. Discussion :

The analysis reveals that Algeria's state-centric governance model ensures stability and access but restricts innovation and responsiveness to global trends. Centralized control by MESRS leads to bureaucratic delays—such as prolonged curriculum updates—which hinder relevance in dynamic fields like technology (Ghrissi, 2022). In contrast, decentralized models like Canada's offer greater institutional flexibility (Clark, 2004).

Limited investment—only 10% of the education budget is allocated to technology—weakens infrastructure and research capacity (World Bank, 2020). The digital divide, marked by uneven internet access and low institutional readiness, limits e-learning, especially in underserved regions (Gkrimpizi et al., 2023). Finland's model illustrates how universal connectivity can enable strong digital ecosystems.

High graduate unemployment highlights the gap between theoretical curricula and labor market demands (World Bank, 2024). Unlike Germany's dual study model, Algerian universities lack industry partnerships, leaving graduates unprepared for fast-changing sectors (Hojeij, 2024; World Bank, 2020). Research output remains low at 0.56% of GDP, reflecting underfunding and bureaucracy (Samah, 2017; Abu-Orabi et al., 2020).

Cultural resistance to reform, rooted in post-independence centralization, continues to hinder institutional autonomy. As El Amine (2019) notes, governance is often misunderstood or absent in academic structures. Tunisia presents a contrasting case, where reform discourse has gained traction.

Recent reforms, like the Digital Master Plan and EMI, show promise but face resistance due to funding gaps, infrastructure challenges, and concerns among French-speaking faculty (Naimi, 2025; Maraf & Zekri, 2023). Botha (2024) emphasizes these issues reflect wider regional challenges, pointing to the need for systemic reform.

a) Link to Existing Literature :

The findings align with global and regional literature addressing higher education governance. Scholars such as Marginson (2011, 2020) emphasize institutional autonomy as vital for competitiveness, a point underscored by Dobbins et al. (2011) and Huisman & Huang (2022) in their advocacy of decentralized and network governance models—structures absent in Algeria’s system. Gkrimpizi et al. (2023) highlight digital infrastructure as a barrier to reform, echoing the challenges Algeria faces in e-learning and modernization efforts.

Regionally, Samah (2017) and El Amine (2019) critique centralization and cultural resistance to reform, linking them to high graduate unemployment and rigid governance. Hojeij (2024) underscores Algeria’s weak university–industry collaboration, while Ghrissi (2022) points to limited digital readiness.

This article contributes to the literature by incorporating emerging dimensions such as AI, open education platforms, and EMI. These are rarely explored in regional analyses but are increasingly central to higher education reforms worldwide.

b) Addressing Research Questions :

The study addresses three research questions, providing comprehensive answers based on the analysis:

1. To what extent does the governance of Algerian universities align with international standards and practices?

Algeria’s state-centric model lags significantly behind international standards, particularly in autonomy and stakeholder involvement. Shared governance models, prevalent in Canada, involve faculty, students, and industry, fostering innovation and responsiveness (Convene, 2023). Network governance, as seen in Europe’s Erasmus program, promotes collaboration and resource sharing (Huisman & Huang, 2022). In contrast, Algeria’s centralized control limits institutional flexibility and stakeholder engagement, resulting in inefficiencies and misalignment with global trends.

2. What are the main challenges that hinder the effectiveness of the higher education governance system in Algeria?

The primary challenges facing the higher education governance system in Algeria include bureaucratic rigidity, funding constraints, digital divides, graduate unemployment, low research output, and cultural resistance. These challenges are rooted in historical centralization, post-independence governance traditions, and current policy frameworks that prioritize state control over institutional autonomy. For example, prolonged delays in curriculum updates and chronic underinvestment in research and development reflect deep structural inefficiencies.

3. What reforms are needed to enhance governance in response to global trends and digital transformation?

Structural reforms, such as decentralization and financial diversification, are essential to increase institutional autonomy. Cultural shifts, including embracing stakeholder participation and innovation, are equally critical. Investments in digital infrastructure, faculty training, and AI adoption can address digital divides and enhance efficiency. EMI and international partnerships can boost global competitiveness, aligning with trends like open education and network governance.

c) Implications for Policy and Practice :

Reforming Algeria's higher education governance requires structural and cultural transformation. Policy priorities should include:

- Granting universities budgetary and curricular autonomy.
- Establishing inclusive governance bodies involving faculty, students, and employers.
- Expanding digital access and training for both faculty and students.
- Fostering industry-academia partnerships to reduce unemployment.
- Supporting EMI through faculty training and curriculum redesign.
- Success indicators may include increased research output, reduce graduate unemployment, and enhance international visibility.

d) Limitations and Future Research :

This study relies on secondary data, which may overlook recent institutional developments or internal dynamics. Future research should incorporate qualitative methods—interviews, focus groups, and case studies—to provide richer insights.

Longitudinal studies could assess the long-term impact of reform initiatives on governance quality and educational outcomes. Comparative research across MENA countries would further illuminate context-specific solutions.

IX. Conclusion and Recommendations:

This study has critically examined Algerian university governance within a state-centric paradigm, uncovering entrenched structural and cultural impediments to innovation, agility, and international competitiveness. Despite serving over 1.53 million students and the adoption of initiatives such as the LMD framework and the Digital Master Plan, the system remains hampered by centralized decision-making, constrained institutional autonomy, and an insufficiently developed digital ecosystem.

By comparing Algeria's governance model with international approaches—particularly shared and network-based systems—the study has highlighted viable reform pathways to enhance quality, autonomy, and resilience. Integrating digital transformation, artificial intelligence (AI), and English-medium instruction (EMI) into the governance discourse offers a forward-looking strategy aligned with global trends.

The key recommendations are as follows:

- **Decentralization and Institutional Autonomy** Delegate substantive authority to universities over curriculum development, budget allocation, and strategic planning, within a clearly defined national accountability framework. This shift will enhance institutional flexibility and responsiveness to emerging academic and labor-market needs.
- **Diversified Funding Mechanisms:** Broaden resource streams by incentivizing public-private partnerships, competitive research grants, and philanthropic contributions. Reducing exclusive reliance on state appropriations will empower universities to pursue strategic investments and foster financial sustainability.
 - **Inclusive and Participatory Governance:** Institutionalize multi-stakeholder councils comprising faculty, student representatives, industry actors, and civil society. Such inclusive bodies will strengthen decision-making legitimacy and ensure that academic offerings remain congruent with societal priorities.
 - **Strategic Digital Transformation:** Prioritize investments in robust ICT infrastructure, equitable campus-wide connectivity, and continuous digital literacy programs for faculty and students. Embedding e-learning and administrative automation within institutional workflows will enhance educational delivery and operational efficiency.
 - **Networked Academic Collaboration:** Cultivate intra-regional and international partnerships—especially across the MENA and African higher-education landscapes—to

facilitate student and faculty mobility, collaborative research projects, and policy exchange. Network governance structures will enrich institutional capacities and comparative advantage.

- **AI-Enabled Governance and Learning Analytics:** Integrate AI tools for predictive analytics in student retention, institutional resource planning, and performance monitoring. Leveraging data-driven decision-making will support proactive interventions and continuous quality improvement.
- **Expansion of Open Educational Resources (OER):** Promote the development and adoption of OER to democratize access to high-quality learning materials, particularly for underserved and remote student populations. OER initiatives can reduce costs and foster pedagogical innovation.
- **Phased Scaling of English-Medium Instruction (EMI):** Implement a structured, multi-stage EMI rollout encompassing comprehensive faculty language training, curriculum redesign, and collaborative partnerships with anglophone institutions. A measured approach will mitigate equity concerns and ensure pedagogical integrity.

These recommendations necessitate not only legislative and policy realignments but also profound cultural transformation within academic and administrative spheres. Achieving a shift from state-driven control to adaptive, innovation-oriented governance will require sustained financial investment, unwavering political will, and active stakeholder engagement.

Future research should assess the implementation of these reforms through empirical studies and monitor their long-term impacts on educational outcomes, institutional performance, and graduate employability—both within Algeria and across the broader MENA region.

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