

# 1       **Revitalizing Iraqi Higher Education: Institutional** 2       **Legacy, Structural Challenges, and Future Readiness**

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 4       *Iraq is currently undergoing an economic transition and facing severe climate*  
 5       *vulnerability. At the same time, Iraq is currently navigating a complex*  
 6       *economic transition compounded by severe climate vulnerability.*  
 7       *Simultaneously, the country faces persistently high graduate unemployment,*  
 8       *widespread employer dissatisfaction with skills, and Higher Education*  
 9       *Institutions play a limited role in addressing pressing national challenges,*  
 10       *including economic diversification, governance reform, and responsiveness to*  
 11       *climate change and sustainability imperatives. Higher education systems in*  
 12       *Iraq are centralised and have expanded rapidly since 2003, driven by post-*  
 13       *conflict reconstruction, demographic pressure, and political commitment to*  
 14       *widening access. However, this quantitative expansion has not been matched*  
 15       *by qualitative improvements in relevance, academic standards, or societal*  
 16       *impact. This paper evaluates the extent to which Iraq's higher education*  
 17       *system is fulfilling its core missions. It identifies critical structural,*  
 18       *pedagogical, and governance challenges and proposes an integrated reform*  
 19       *framework designed to make the system "fit for purpose." The proposed*  
 20       *framework seeks to align Iraqi institutions with international standards while*  
 21       *overcoming systemic constraints in curriculum design, research output, and*  
 22       *external engagement. Ultimately, the paper advocates for transforming higher*  
 23       *education into a strategic driver of sustainable development, meeting national*  
 24       *priorities, and emerging future issues such as climate change and*  
 25       *sustainability.*

26  
 27       **Keywords:** *Higher Education, Challenges, Reform, strategy, Iraq*

## 28 29 30       **Introduction**

31  
 32       Higher education is increasingly seen as a strategic asset for national  
 33       development, particularly in fragile and post-conflict states where institutional  
 34       capacity, social trust, and economic opportunity must be rebuilt simultaneously.  
 35       In fact, higher education is widely recognised as a cornerstone of human capital  
 36       development and economic competitiveness (World Bank, 2018). In fragile and  
 37       post-conflict states, Higher Education Institutions also play a critical role in  
 38       rebuilding institutions, fostering social cohesion, and producing skilled  
 39       professionals for both the public and private sectors. Hence, Higher Education  
 40       Institutions are expected not only to educate graduates but also to generate  
 41       knowledge, support innovation, and contribute to social cohesion (Milton and  
 42       Barakat, 2016; Baban, 2019a, Baban, 2024a).

43       More than thirty years ago, Iraq had an excellent higher education system.  
 44       Unfortunately, that system has been continuously degraded over the years by  
 45       Iraq's severe circumstances, including decades of conflict, sanctions, political  
 46       instability, and ill-fated modifications by higher authorities (Mahmud, 2013;  
 47       Makarova et al., 2025). Recently, Higher Education Institutions have struggled  
 48       to respond effectively to rapid demographic growth, economic restructuring,

1 environmental stressors and graduate unemployment (World Bank, 2022,  
 2 Baban, 2024a). Other serious efficiency concerns include the awarding of  
 3 leadership positions based on political and religious ideologies and interests; the  
 4 use of dated, inconsistent curricula; the lack of modern laboratory equipment;  
 5 and modest libraries (Jawad and Al-Assaf, 2019). These challenges are  
 6 consistent with several studies that indicate the occurrence of these issues in  
 7 post-conflict higher education systems, which are characterised by weak  
 8 governance, politicisation, underfunding, and skills mismatches. They also refer  
 9 to expansion without reform often leads to credential inflation and  
 10 unemployment, undermining public trust in education (Milton and Barakat,  
 11 2016; World Bank, 2018; Mahmud, 2013).

12 Iraq's higher education system is among the most centralised in the Middle  
 13 East. The Ministry of Higher Education and Scientific Research (MOHESR)  
 14 exercises extensive control over the governance, management, funding model,  
 15 admissions quotas, curricula and staffing. While this ensures uniformity, it,  
 16 amongst other things, constrains institutional responsiveness and innovation  
 17 (Table 1) (Mahmud, 2013; Ismail and Ahmed, 2020). Additionally, Iraq have  
 18 invested heavily in expanding higher education. Between 2003 and 2020, student  
 19 enrolment in Iraq more than tripled (World Bank, 2020). Private higher  
 20 education institutions expanded rapidly, often filling capacity gaps left by public  
 21 institutions. However, regulatory oversight has struggled to keep pace, resulting  
 22 in wide variation in quality. As a result, there was a rapid increase in student  
 23 enrolment, high student–faculty ratios, under-resourced laboratories, and uneven  
 24 academic standards (World Bank, 2020). However, expansion has not been  
 25 matched by comparable improvements in quality, relevance, or outcomes.  
 26 Graduate unemployment remains high; employers report skill mismatches; and  
 27 research output has a limited impact on policy or industry (Mahmud, 2013;  
 28 UNESCO, 2021; Baban, 2024b) (Table 1).

29 Iraq is among the countries most vulnerable to climate change, facing  
 30 increasing temperatures, water scarcity, desertification, and energy insecurity  
 31 (IPCC, 2023). These challenges require a workforce equipped with climate  
 32 literacy, green skills, and adaptive capacity. Hence, higher education faces a  
 33 pivotal moment. Factors such as rapid population growth, high unemployment  
 34 among graduates, climate change risks, and economic shifts necessitate a major  
 35 shift in Higher Education Institutions towards sustainability, labour-market  
 36 relevance, and resilience to climate challenges (Baban, 2018a; Baban, 2024a).  
 37 Fortunately, Iraq has a youthful population and expanding global collaborations,  
 38 offering a valuable opportunity to steer educational reforms toward sustainable  
 39 development and environmentally sustainable growth. Consequently, to  
 40 contribute to the desired development, Iraqi Higher Education Institutions must  
 41 provide society with qualified manpower in various scientific disciplines and  
 42 professions, striving to develop society and address problems through the  
 43 production of scientific research, and provide the community with highly  
 44 qualified personnel to lead and take responsibility for the community's  
 45 construction and development (Mahmud, 2013).

The concept of “fitness for purpose” in higher education refers to the extent to which institutions effectively fulfil their intended missions within a given socio-economic context (Harvey and Green, 1993). In developing and post-conflict contexts, these purposes should typically include producing employable graduates with relevant skills, generating relevant applied research, supporting economic diversification, and promoting civic values, critical thinking, and social cohesion (Harvey and Green, 1993; Schendel and McCowan, 2016).

**Table 1.** *Structural Characteristics of Higher Education Systems in Iraq (World Bank, 2020a; Ismail and Ahmed, 2020)*

| Element                     | Currently in Iraq                        | Implications for Fitness for Purpose                                                                         |
|-----------------------------|------------------------------------------|--------------------------------------------------------------------------------------------------------------|
| Governance                  | Centralised under MOHESR                 | Constrained capacity for rapid institutional adaptation and stakeholder alignment                            |
| University autonomy         | Low                                      | Impedes flexible, market-aligned curriculum enhancement                                                      |
| Public vs private provision | Public dominant and rapid private growth | Systemic impediments to effective quality assurance and academic governance                                  |
| Funding model               | Item public budgeting                    | Insufficient structural incentives to encourage high-quality performance and accountability                  |
| Quality assurance           | Government led and compliance-oriented   | Inadequately equipped with outcome-focused mechanisms to measure academic quality and operational efficiency |

This paper proposes a framework to modernise higher education systems in Iraq, aligning them with their intended purpose of producing skilled, adaptable graduates who support green economic development, national climate adaptation and mitigation goals, sustainable development, and nation-building.

## Methodology

This study employs a qualitative, interpretive research design that combines systematic literature analysis with the authors’ extensive professional experience in higher education governance and management. The approach is designed to generate analytically grounded, practice-informed insights into governance structures, managerial effectiveness, and reform pathways in higher education systems. As a result, rather than producing primary empirical data, the study adopts a theory-informed, experience-validated synthesis, appropriate for

examining complex, multi-level governance issues that are insufficiently captured by purely quantitative methods.

The research is situated within a pragmatic and constructivist epistemological framework, recognising higher education governance as a socially constructed system shaped by policy, institutional culture, leadership practices, and contextual constraints. Knowledge is generated through critical engagement with existing scholarship and reflective analysis of long-term professional practice. Regarding identification and selection, a structured literature search was conducted, focusing on university governance, management, and leadership; relevance; accountability; institutional autonomy and accountability; quality assurance; and governance reform in developing, post-conflict, and transitional contexts.

In terms of the role of professional expertise, the authors' extensive experience in higher education governance and management, spanning institutional leadership, policy advisory roles, and system-level reform initiatives, serves as a critical interpretive lens rather than a source of anecdotal evidence. This experience was systematically used to validate and contextualise findings from the literature, identify gaps between theoretical governance models and practical implementation, and assess the feasibility and transferability of proposed reforms. Reflective practice techniques were employed to ensure that experiential insights complemented rather than overshadowed the scholarly evidence. As the study relies exclusively on published literature and reflective professional experience, no human subjects were involved. Ethical standards regarding academic integrity, accurate citation, and transparent reporting of methods were strictly observed. The study acknowledges limitations inherent in literature-based and experience-informed research, including dependence on the availability and quality of existing studies and potential subjectivity in experiential interpretation. However, these limitations are offset by the depth of analysis, conceptual rigour, and strong relevance for policymakers and higher education leaders.

## **Key Issues, Challenges and Proposed Solutions**

### *Ongoing Interlinked Issues*

#### Governance and Management

Governments have an important role in raising educational standards by encouraging reform, rewarding those who embrace it, and penalising those who do not. They must also be willing to step back and empower institutional leadership and independent higher education commissions to lead reform efforts, recognising that internal reforms cannot be imposed; they must be internalised to succeed (Katherine Wilkens, 2011; Baban, 2024b).

In Iraq, university governance and regulation are highly centralised and inflexible. Higher Education Institutions lack significant authority over crucial aspects such as curriculum development, approval standards for new degrees,

staff hiring and promotion, as well as budget management and revenue generation. Furthermore, institutional actors at all levels are primarily accountable to state authorities; most are government entities that lack the independence and capacity to pursue more substantial reforms (Mahmud, 2013). Despite these circumstances, institutions are being asked to do more with less. Nevertheless, results cannot be expected to improve without tackling this difficult task (Katherine Wilkens, 2011; Mahmud, 2013). These arrangements significantly affect the system's effectiveness in meeting the needs of students, faculty, and employers. They also hinder the system's ability to be proactive, respond quickly, and adapt to the continuously evolving landscape of higher education (Baban, 2022; Baban, 2024b).

### **Proposed Solutions:**

A way forward for enhancing governance and management is to promote decentralisation and institutional autonomy, eliminate bureaucratic constraints, establish transparent leadership selection, and implement performance-based management. In addition to working toward diversifying funding sources through public-private partnerships and performance-based funding models. Also, to introduce strong quality assurance mechanisms and environmentally responsible campus operations.

### **Relevance of Education and Assessment Practices**

The higher education systems in Iraq have traditionally emphasised theoretical knowledge over applied learning. Curricula are often outdated and disconnected from labour market demands, particularly in emerging sectors such as renewable energy, environmental management, and digital services (UNESCO, 2021). Additionally, there is an overemphasis on knowledge at the expense of other skills and attitudes. Furthermore, classroom teachings and instruction are often delivered in a spoon-feeding way with minimal student interaction. Hence, pedagogy remains dominated by rote learning, lecture-based delivery, and high-stakes examinations (Makapova and Makapova, 2018; Makarova et al., 2025). As a result, many programmes remain theory-heavy, outdated, and disconnected from labour market needs. Employers consistently report deficiencies in critical thinking and problem solving. These observations are supported by the International Labour Organisation, which indicated that youth unemployment among university graduates in Iraq is significantly higher than among those with lower educational attainment, indicating a mismatch between qualifications and available jobs. This mismatch undermines public trust in higher education and limits its contribution to economic diversification (ILO, 2021; Baban, 2024b, 2024c).

### **Proposed Solutions:**

Evidently, the curriculum and pedagogy need to be updated to a competency-based and market-oriented curriculum. The focus should be on outcome-based education frameworks, the integration of digital learning and blended education, the promotion of critical thinking, problem-solving, and

transferable skills across all programmes, and the expansion of work-based learning, internships, and capstone projects. Furthermore, there is a critical need to move towards student-centred learning, project-based assessment, and experiential education, which are currently limited, particularly in public Higher Education Institutions (Table 2) (OECD, 2020; Harvey and Green, 1993; Salmi, 2017). Also, to introduce green skills related to energy efficiency, water management, sustainable agriculture, and environmental assessment (ILO, 2019). Also working to introduce and expand blended and digital learning platforms, promoting building faculty development programs, encouraging international exchange and returnee programs, developing institutional data systems, and using them for institutional planning and student success monitoring (Harvey and Green, 1993; Salmi, 2017) (Table 3).

#### Research and Innovation Constraints

During the 1970s, research centres benefited from substantial financial support due to the oil industry's boom. However, this changed in the 1980s because of the conflict with Iran. In the 1990s, the situation worsened as shortages of funding, materials, equipment, and literature became more pronounced, especially with international sanctions restricting the import of dual-use materials and equipment (Mahmud, 2013). As a consequence, there are many challenges facing scientific research, these include (Sattar B. Sadkhan, 2010; Baban, 2018b):

**Table 2.** *Key Skills Mismatch Reported by Employers in Iraq (ILO, 2021; Assaad et al., 2020).*

| Skill Category       | Employer Assessment | Typical University Provision                                               |
|----------------------|---------------------|----------------------------------------------------------------------------|
| Critical thinking    | Weak                | Overly theoretical and lacking practical application                       |
| Problem-solving      | Weak                | Excessively theoretical and deficient in practical, hands-on integration   |
| Digital literacy     | Moderate to weak    | Inconsistently implemented across institutions                             |
| Communication skills | Weak                | Lacks systematic, formal evaluation mechanisms                             |
| Teamwork             | Weak                | Primary emphasis on individual assessment                                  |
| Work readiness       | Very weak           | Internship programs lack systemic organization and standardized frameworks |

1 **Table 3.** *Dominant Teaching and Assessment Practices (Harvey and Green,*  
 2 *1993; Salmi, 2017).*

| Aspect            | Prevailing Practice | International Best Practice                                                                             |
|-------------------|---------------------|---------------------------------------------------------------------------------------------------------|
| Teaching mode     | Lecture-based       | Combines student-focused learning strategies with flexible, technology-enhanced delivery                |
| Assessment        | Final exams         | Advocates for a shift from traditional examinations to continuous, project-driven assessments           |
| Learning outcomes | Implicit            | Ensures academic programs adopt explicit, evidence-based learning outcomes to track student performance |
| Industry exposure | Limited             | Enhances workforce readiness by embedding structured industry internships into core degree pathways     |
| Use of technology | Basic               | Enhances educational engagement by embedding adaptive digital technologies across teaching practices    |

1. Funding: Research is not adequately supported by the government, and owing to limited budgets, research is fragmented, poorly linked to national priorities and mainly depends on postgraduate students and often involves collaboration with partners from the economic or military sectors, who fund particular projects.
2. Strategic: The of clear strategies for scientific research within Higher Education Institutions across different research fields.
3. Organisational and Management: The lack of Central National Research Institutes to supervise and coordinate scientific research, coupled with the inefficacy of current research organisations. In addition to the Immense gap between the private sector and the scientific research centres within Higher Education Institutions.
4. Information: scarcity of sufficient statistics and available data, delays in publishing quality research papers, and underutilization of scientific research results in practice.
5. Limited international collaboration

### Proposed Solutions:

To establish a Central National Research Institutes organisation to manage quality research, introduce national research funding mechanisms and develop incentive systems that will prioritise relevant applied research that is linked to national priorities such as water scarcity, renewable energy, and climate-resilient infrastructure. Also, establishing interdisciplinary research centres and green innovation hubs to support knowledge transfer and startup creation that can contribute to a sustainable green economy (OECD, 2021; World Bank, 2018). Moreover, it is recommended to facilitate university-government-industry

research partnerships, enhance international collaboration, and strengthen industry collaboration (Table 4).

**Table 4.** *Research Orientation in Iraq (UNESCO, 2021; World Bank, 2018)*

| Dimension                    | Current State      | Reform Priority                                                                                                                                                           |
|------------------------------|--------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Research resource allocation | Low, fragmented    | Research funding operates on a competitive, thematic basis targeting strategic socio-economic priorities through peer-reviewed grant proposals.                           |
| Incentives                   | Publication counts | Research incentives prioritize measurable socio-economic impact and direct societal relevance over purely quantitative publication metrics.                               |
| Policy relevance             | Limited            | Scientific inquiry should be strategically aligned with key policy imperatives, translating evidence-based research into actionable governance and regulatory frameworks. |
| Industry collaboration       | Rare               | Research collaboration must be formalised and embedded within institutional frameworks rather than relying on ad-hoc, informal relationships.                             |
| Interdisciplinarity          | Weak               | Interdisciplinary research must be structurally embedded and actively incentivized across academic institutions.                                                          |

### Quality Assurance

A primary challenge for Iraq's higher education is to become autonomous institutions focused solely on education, free from centralisation and from political, religious, and ethnic pressures. There is currently no independent agency to regulate and uphold standards in teaching and research. Additionally, both government and private research funding bodies are lacking, making it difficult to support, promote, and recognise excellence in research (Rasian, 2009).

The large number of students who have sought entry to higher education in Iraq over the last decade has put considerable pressure on the system, strained government resources and led to a focus on expanding quantity rather than quality (Mahmud, 2013). With some exceptions, new private institutions are seen as further undermining quality and equity and producing graduates at high personal cost without the knowledge and skills needed to succeed professionally (Baban, 2018; Baban, 2024a)

### **Proposed Solutions**

It is necessary to develop and empower independent accreditation bodies to apply consistent standards across public and private institutions. It is also important to align accreditation standards with international benchmarking and



partnerships, to prioritise continuous improvement over compliance-driven evaluation, and to support.

### *Growth and Diversification*

Private higher education has grown rapidly, often adapting more quickly to student demands and market trends than public institutions. Private Higher Education Institutions now enrol a significant proportion of students, particularly in fields such as business, information technology, and health-related areas. However, rapid expansion has raised concerns regarding programme quality, completion rates, and graduate outcomes (Ismail and Ahmed, 2020). Furthermore, students from rural areas and lower-income households are unlikely to attend private institutions, thereby perpetuating inequality.

### **Proposed Solutions**

Success in growth and diversification requires that higher education reform in Iraq be systemic rather than piecemeal. Additionally, there is a need to link autonomy to robust quality assurance mechanisms and alignment with the labour market to avoid unemployment. Additionally, strengthening the accreditation process and monitoring capacity, and removing political interference. Additionally, develop regulatory frameworks governing private higher education institutions; rather than viewing private institutions as a threat, policymakers could strategically integrate them into national higher education planning. Then, they can be used constructively to pilot innovative curricula and delivery models, expand access without overburdening public budgets and enhance competition and responsiveness.

### *Emerging Interlined Changes and Pressures*

#### Climate Change

Iraq is ranked among the countries most exposed to climate risks, including prolonged droughts and declining water availability in the Tigris and Euphrates basins (World Bank, 2022; Baban, 2024c). Yet, climate resilience is marginal in most university curricula and in research beyond a few technical disciplines.

### **Proposed Solutions**

Higher Education Institutions (HEIs) can play a critical role in understanding and managing climate change crises through their education, training, and research activities. Hence, they can be important players in the formation of professionals, in the provision of services to communities and the government, and in functioning as micro-societies and economies in their own right (McCowan, 2020; Filho et al., 2023). Additionally, HEIs can build a climate-resilient workforce by educating students about climate science, equipping them with skills for the green economy, and fostering attitudes and behaviours necessary for effective engagement with climate solutions. In addition to shaping public discussions by sharing scientific facts about climate change and prompting discussions on the significant economic and political

transformations needed (McCowan, 2020; Filho et al., 2023; Nosir, 2023; Baban, 2025a).

Higher Education Institutions should similarly support climate adaptation research, sustainable public policy, community engagement and evidence-based policymaking (UNESCO, 2020). Additionally, integrating climate change across disciplines rather than confining it to the environmental sciences enhances societal awareness and prepares graduates to address climate-related challenges across all sectors.

### Sustainable Development

A sustainable future begins with informing individuals and inspiring a respect for nature. When people develop a sense of responsibility for caring for the environment, their attitudes and behaviours support sustainable practices that balance environmental, social, and economic needs, thereby ensuring prosperity for all. Iraq is currently facing several challenges, including rapid urbanisation, expansion of desertification, frequent and intense dust storms, floods, prolonged drought, and heatwaves, with temperatures frequently exceeding 50°C (Lelieveld et al., 2012; Janabi, 2013; IPCC, 2022; Baban, 2024a). However, teaching and research on sustainability are marginal in most university curricula and in research beyond a few technical disciplines.

### **Proposed Solutions:**

Higher Education Institutions (HEIs) play a crucial role in building a sustainable future. Their importance comes from their ability to connect theoretical knowledge with practical solutions for mitigation and adaptation. This involves analysing the specific causes and impacts in particular locations, conducting and leading research, developing renewable energy solutions, and promoting sustainability through campus projects.

Aligning university missions with the SDGs can also enhance coherence across education, economic, and environmental policy. In fact, failure to integrate sustainability undermines long-term national resilience. Hence, higher education can play a role in achieving sustainability and realising the relevant SDGs, particularly SDGs 4 (Quality Education), 8 (Decent Work), 9 (Innovation), and 13 (Climate Action). In general, integrating SDG-related content across disciplines can increase student awareness of sustainability challenges, build interdisciplinary problem-solving skills and connect academic learning with real-world issues. An additional step is to transform campuses into “living laboratories” for sustainability through renewable energy use, water conservation, and waste management, thereby reinforcing educational objectives while reducing operational costs (UNESCO, 2021). Also, to support research aligned with Iraq’s sustainability priorities, embed sustainability and environmental ethics across all disciplines, establish interdisciplinary programs in sustainable agriculture and water resources, environmental economics and policy, and promote problem-based learning focused on sustainability challenges. These steps will promote the research and innovation necessary to manage the impacts of development and climate change sustainably, and to learn to live and function with risk, uncertainty, and rapid change.

## Employability and Labour Market Alignment

Across the Middle East and North Africa (MENA), graduate unemployment remains disproportionately high despite rising educational attainment (Assaad et al., 2020). Studies consistently identify similar skill gaps to those observed in Iraq: soft skills, applied technical competencies, and work experience (UNESCO 2004).

The weakness and ambiguity of the relationship between higher education, graduates, and the job market are evident in the underdevelopment of effective internships, cooperative education, and joint research initiatives, which, in turn, limit graduate employability and innovation capacity (Baban, 2024a; 2024c). As a result, this system, along with the mismatch between education and labour market needs, tends to produce graduates who are academically overqualified but professionally underprepared, leading to high graduate unemployment. In fact, there is growing recognition that Arab higher education systems should focus more on improving the “relevance” of their services in terms of knowledge and research, and on linking them to the labour market and economic development (Katherine Wilkens, 2011).

### **Proposed Solutions:**

The misalignment between academic programs and market needs can be addressed by developing a curriculum systematically aligned with labour market needs through regular employer consultation, labour market assessments, and university-industry linkages. Introducing mandatory internships, cooperative education, and project-based learning can significantly enhance graduate employability (World Bank, 2020). Programs should also incorporate digital competencies, entrepreneurship, and sustainability principles across disciplines. Additionally, developing productive collaboration among Higher Education Institutions, industry, and government is essential for strengthening alignment between educational outcomes and the workforce. This can be achieved through the collaborative design and delivery of joint research projects and professional certification programs (Etzkowitz and Leydesdorff, 2000).

## Higher Education Institutions as Civic Institutions

In Iraq, higher education can play a critical role in promoting civic values, critical thinking, and social cohesion. In a society marked by ethnic, sectarian, and political divisions, higher education can foster dialogue and a shared national identity. Furthermore, higher education is vital to society, as it generates new knowledge, educates students, and fosters creativity and innovation. These institutions are central to the production and dissemination of knowledge through research and teaching, and they bear a special social duty to promote values, citizenship, and civic participation. Additionally, they develop human capital, which is essential for overcoming unemployment and key to social and economic progress (Katherine Wilkens, 2011).

## **Proposed Solutions:**

Developing curricula that encourage debate, ethics, and public engagement will enable the higher education sector to potentially play an important role in overcoming the country's widening sectarian divides and fostering long-term peace and stability. Additionally, as the leading actor within Iraq's civil society, it could provide an institutional venue for resolving the country's political, social, and economic problems while promoting respect for human rights and democratic principles both on campus and in wider society (Harb, 2008; Mahmud, 2013; UNESCO, 2021).

## **4. Making Higher Education Fit for Purpose: A Way Forward**

To become truly "fit for purpose," Iraqi Higher Education Institutions must equip society with qualified professionals across diverse scientific and professional disciplines. This mission involves driving societal development through the production of impactful research and the cultivation of highly qualified personnel capable of assuming leadership roles in the nation's construction and development (Baban, 2024a, Baban, 2024b, Baban, 2025b).

Currently, Higher Education Institutions (HEIs) in Iraq face several critical challenges:

- **Labour Market Mismatch:** A significant disconnect between educational outputs and market demands, resulting in persistently high graduate unemployment.
- **Pedagogical Imbalance:** An overemphasis on theoretical instruction at the expense of practical, digital, and entrepreneurial skill development.
- **Overlooking the natural Environment:** Insufficient integration of climate change and sustainability imperatives into both curricula and research agendas.
- **Collaborative Gaps:** Limited synergy and collaboration between Higher Education Institutions and the industrial sector.
- **Strategic Direction:** A lack of focused emphasis on nation-building and the long-term goals of sustainable development.

While the need for reform is clear, such transformation does not occur in a vacuum; political incentives, institutional interests, and resource constraints inevitably shape it. Experience suggests that successful reform requires sustained political commitment, deep stakeholder engagement, and close alignment with broader economic strategies (Altbach et al., 2019). Hence, in the Iraqi context, reform efforts must navigate centralised bureaucratic traditions, patronage-based employment expectations, entrenched academic cultures, and the fiscal volatility inherent in a rentier economy dependent on oil revenues. These systemic constraints explain the historically slow and fragmented nature of reform. Ultimately, these challenges underscore the necessity of integrating higher education reform into the broader framework of public-sector and economic restructuring.

Reforming Iraq's higher education sector is a strategic imperative for addressing graduate unemployment, fostering economic diversification, and mitigating climate vulnerability. By aligning curricula with labour market demands, embedding sustainability across disciplines, and strengthening research partnerships, Higher Education Institutions can be repositioned as central actors in sustainable development. Drawing on the "fitness for purpose" model, the following strategic steps are necessary:

1. Legislative Reform and Institutional Autonomy: Develop a comprehensive strategy for higher education and scientific research supported by flexible legislation. This includes establishing clear contractual frameworks between the government and Higher Education Institutions, allowing institutions to exercise the independence granted by law while remaining under the strategic oversight of the Ministry to ensure the fulfilment of national commitments.
2. Strategic Market Alignment: Conduct rigorous labour market analyses to guide student distribution across Higher Education Institutions. This requires close coordination between the Ministry of Higher Education and the Ministry of Planning to ensure that academic outputs meet the actual needs of the job market.
3. Decentralisation and Financial Independence: Restructure the highly centralised Iraqi higher education system to allow for greater local flexibility. This must include expanding university authority over financial management through the implementation of a modern, flexible monetary system.
4. Institutional Specialisation: Shift away from the current "one-size-fits-all" model where Higher Education Institutions mirror one another's college and department structures. Instead, focus on designing specialised institutions that cater to the unique needs and ecological diversity of their surrounding environments.
5. Pedagogical Modernisation and Faculty Development: Create an environment conducive to modern scholarship by renewing curricula, learning materials, and instructional methods. Prioritising faculty development, particularly in digital pedagogy and climate education, is essential. Furthermore, international partnerships and training opportunities at world-class research centres should be expanded to bridge the knowledge gap.
6. Regulation of Private Education: Amend the private education law to enhance quality control and ensure a more equitable distribution of resources, ensuring that private institutions meet the same rigorous standards as their public counterparts.
7. Cultivating a Research Culture: Allocate dedicated resources to Research and Development (R&D) to drive social and economic renewal. This involves defining research specialisations across academic institutions based on existing competencies and improving coordination and communication between research centres.

8. Quality Assurance and Global Accreditation: Update research and teaching facilities while introducing rigorous, measurable and verifiable Quality Assurance (QA) and Quality Control (QC) mechanisms. This will ensure that Iraqi academic programs meet international standards and gain global recognition.

The following indicators are recommended to be used evaluate the success towards transition toward a "fit for purpose" system:

1. Strategic Contribution to Economic Diversification: The demonstrable role of Higher Education Institutions in supporting non-oil sectors through innovation, specialised workforce training, and entrepreneurial initiatives.
2. Increased National Adaptive Capacity: A strengthened national ability to address climate change through targeted research, policy support, and a workforce skilled in sustainability.
3. Enhanced Graduate Employability: A measurable reduction in the skills mismatch and a significant increase in the absorption rate of graduates into the labour market.
4. Institutional Resilience and Sustainability: The development of higher education institutions that are financially stable, operationally decentralised, and capable of weathering environmental and economic shocks.
5. Elevated Global Competitiveness: Improved regional and international standing through academic accreditation, cross-border research collaborations, and higher positions in global university rankings.

In terms of implementation, it is recommended that reform should follow a phased approach: starting with pilot programs and capacity building, then moving toward system-wide scaling. Reformers must also carefully navigate political and resource constraints by maintaining high-level commitment and stakeholder buy-in. Furthermore, a critical step will be the integration of higher education into Iraq's national development and climate strategies. This necessitates a seamless coordination between government ministries, academic institutions, and the private sector. By aligning institutional reform with economic and environmental objectives, Iraq can establish a higher education system that serves as a cornerstone for long-term national stability.

## Conclusions

Iraq is currently navigating a multifaceted crisis characterised by a difficult economic transition, high graduate unemployment, and escalating climate change vulnerabilities. At present, the Higher Education (HE) sector plays a limited role in addressing these pressing issues, leaving the system at a critical crossroads. Although access to education has expanded, the current framework

remains insufficiently aligned with labour market demands, sustainability imperatives, and broader national development goals.

This paper evaluates the extent to which Iraq's higher education system is "fit for purpose" and fulfilling its core missions. It argues that the system is not yet equipped to meet contemporary economic, social, and environmental challenges. By applying the "fitness for purpose" conceptual lens, this study identifies significant structural constraints across governance, curriculum, pedagogy, research, and external engagement.

To address these challenges, the paper presents a strategic framework and reform pathway that is grounded in local realities yet informed by international best practices. This model seeks to transform Iraq's higher education into a resilient, relevant, and future-oriented system capable of fostering long-term socio-economic stability. The study asserts that achieving this transformation requires a fundamental shift from quantity to quality, from centralised control to institutional autonomy, and from academic isolation to active societal engagement.

Higher Education Institutions must be repositioned as engines of employability, innovation, and resilience to contribute meaningfully to Iraq's future. Specifically, reform efforts should prioritise:

1. Curricular Alignment: Modernising academic programs to meet the needs of the labour market and the emerging green economy.
2. Sustainability Integration: Embedding climate change awareness and sustainable practices across all disciplines and campus operations.
3. Knowledge Exchange: Strengthening applied research and fostering robust partnerships between academia, industry, and government.

By offering insights from a fragile, post-conflict context, this study contributes to the comparative higher education literature, outlining a reform trajectory that balances local necessity with global evidence-based standards.

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