

A Critical Review of Algerian Universities in the Time Higher Education

Ranking

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Abstract

This study examines Algerian universities' current standing in international university rankings, with a particular focus on the Times Higher Education Rankings. The evaluation of the Top 10 universities in Algeria based on sub-indicators revealed that Algerian universities' performance has not yet reached the standards observed in universities in the region and industrialized nations. Despite the state's significant financial and human resources allocated to the higher education industry, as well as efforts made at all levels, the majority of universities included in the ranking were classified as 1501+ from 2018 to 2024. This study investigates the primary challenges faced by Algerian universities, the reasons for their failure to realize their full potential, and the necessary changes required to improve their standing in international ranking systems. Several significant findings have emerged from the investigation: Algerian universities have made significant advances in recent years in terms of teaching quality and scientific research; however, they continue to lag behind prominent colleges in other global regions. Algerian universities with superior academic performance are located in prominent urban areas; however, they must improve their global competitiveness by improving and developing research productivity, industrial income, and international perspective. The Algerian government should prioritize supporting universities that have achieved significant results in the sub-indicators, as these universities have the potential to contribute to improving Algeria's overall higher education quality.

Keywords: Higher education, Times Higher Education ranking, Algerian universities, Performance analysis.

Introduction

The evaluation and classification of universities have grown in importance in today's increasingly competitive academic environment. These rankings are generated by a variety of international organizations and entities in a globally competitive environment characterized by the

pursuit of performance excellence. They intend to provide opportunities for policymakers to promote reformative initiatives and work toward their development in accordance with the criteria outlined in these rankings. Furthermore, these rankings help students choose institutions that match their goals and aspirations, allowing comparisons between higher education and research institutions to ensure higher education attainment.

Among the most well-known global classification systems are the Q.S. World University Rankings, the Academic Classification of World Universities (ARWU), and the Times Higher Education World University Rankings (THE). These rankings assess the performance of universities based on factors such as research output, instructional quality, internationalization, and institutional reputation. Attaining a prominent position in these assessments has emerged as a central objective for all institutions of higher education. This phenomenon can be attributed to the fact that achieving a high ranking can yield a multitude of advantages, including augmented student enrollment, amplified research funding, and enhanced reputation and prestige.

Algeria, like many other countries, has worked to develop and improve its higher education sector. Algerian universities have made significant strides in recent years by expanding their academic offerings, encouraging research, and nurturing the development of talented individuals. In this day and age of increased internationalization and increased global competition, it is critical to understand how Algerian universities are perceived globally. The purpose of this research is to provide a comprehensive analysis of Algerian universities' performance within the context of the Times Higher Education World University Rankings. This strategy will seek to identify the factors influencing their global positioning, highlight their strengths, and pinpoint potential areas for improvement.

Methodology

This study will examine the rankings in depth to reveal the complexities of Algeria's top 10 universities' performance in various areas such as research productivity, teaching excellence, internationalization initiatives, institutional standing, and industry income. Examining the Times Higher Education Rankings critically from an Algerian perspective will add to the ongoing debate about the future of higher education in this dynamic and culturally rich North African country. The following issues will be addressed in this paper: What Algerian universities are at the top of the most recent THE ranking? What factors contribute to Algerian universities' current ranking in the Times Higher Education ranking? How can Algerian universities improve their international rankings?

The Time Higher Education ranking

The Times Higher Education Survey (THE) ranking was released on October 8, 2009, to much acclaim and some chagrin around the world, to inform individual universities or faculties about how their institutions fare from year to year.¹ Because of a collaboration with "Quacquarelli Symonds" (Q.S.), the ranking was known as THE-QS World University Ranking between 2004 and 2009.

¹ Fred Bookstein, Horst Seidler, Martin Fielder, Gerog Winckler, Too much noise in the Times Higher Education rankings, Scientometrics, Vol°85, Issue 1, 2010, P 296.

Significant changes in methodology and indicators were observed after "Times Higher Education" merged with "Thomson Reuters" in 2009.²

To evaluate universities on a worldwide level, the ranking methodology utilizes a collection of indicators and their respective weights. The evaluation criteria include the following elements: 40% is attributed to peer review, 10% to rankings by prominent graduate recruiters, with a focus on international recruiters, 20% to the number of citations per capita of academic papers published, 20% to the ratio of teaching staff to students, and 10% to the degree of 'international orientation'. Through evaluating these factors, a statistical measure known as the "z-score" is derived. Then, the ranking process begins, in which a scoring table known as "score" is used to normalize scores derived from various criteria. This distinguishing feature of the TIME ranking system is noteworthy.³ The 2024 Times Higher Education World University Rankings (THE WUR) include 1904 universities from 108 countries and regions. The table is based on THE WUR 3.0 methodology, which consists of 18 meticulously calibrated performance indicators that assess an institution's performance in five areas: teaching (39.5%), research environment (29%), research quality (30%), industry (4%), and international outlook (7.5%).⁴

Presentation of the top 10 Algerian universities

University Djellali Liabès Sidi Bel-Abbès was elevated to university status in 1989 after beginning as a university center in 1978. It consists of nine faculties. The university is home to numerous research laboratories and research centers, with 56 research laboratories. Technology, medicine, languages and art, humanities and social sciences, economics and business, exact sciences, law and political science, nature and life sciences, and electrical engineering are among the programs available to students.⁵

University Ferhat Abbas Setif 1 was founded in 1978 as the Setif University Centre. It seeks to become an active territorial actor, a socially responsible university that operates eight faculties - offering 141-degree courses, 1828 faculty members, 47 research structures, and an experimental farm - from three campuses and with students representing 23 different nationalities. Research projects at an institution aiming to be a "*development driver*" for the region include an exhaustive study of the threats to local ecological balance by the Laboratory of the Urban Project, City, and Territory.⁶ The Ferhat Abbas University Setif 1 was ranked second among Algerian universities in the 2018 Nature Index.⁷

Until 1962, the campus of the University 20 Août 1955 Skikda housed the School of Agriculture and Viticulture, which was known as Philippeville during French colonial rule. After being established as a University Centre in 1998, the institution attained full university status in 2001. The largest of the university's six faculties is science and technology, followed by humanities and social science, natural and biological sciences, and letters and languages. Postgraduate

⁴ https://www.timeshighereducation.com/

² Büşra Almaa , Erman Coşkun , Ezgi Övendirelic, University ranking systems and proposal of a theoretical framework for ranking of Turkish Universities: A case of management departments, 12th International Strategic Management Conference, ISMC 2016, 28-30 October 2016, Antalya, Turkey. P 130.

³ Farzana Anowar, Mustakim A. Helal, Saida Afroj, Sumaiya Sultana, Farhana Sarker, and Khondaker A. Mamun, A Critical Review on World University Ranking in Terms of Top Four Ranking Systems, lecture notes in electrical engineering book series, volume 312, Springer International Publishing Switzerland 2015, 560

⁵ https://www.univ-sba.dz/index.php/en/

⁶ <u>https://eng.univ-setif.dz/</u>

⁷ https://www.timeshighereducation.com/world-university-rankings

enrollment has also increased significantly over the years. The university has 29400 seats, 1191 employees, 6 faculties, 1111 teachers, 30165 students, 21 research laboratories, 13 nationalities, and 92 international students, with 80% from Palestine and RASD and 40% in the LMD cycle.⁸

University 8 Mai 1945 Guelma was founded in 1986 as a national institute, then in 1992 as a University Centre, and in 2001 as a comprehensive university with three faculties. Under the slogan *"Integrity, Knowledge, Creativity"*, the university provides students with *"quality training based on the pursuit of excellence and truth, particularly in the sense of a work ethic that will serve as a foundation for their career success."⁹ The University has seven faculties, and recent accomplishments include signing 17 cooperative agreements in the 2018/9 academic year, eight of which were with European universities, and establishing a university incubator in 2019; web presence was deemed an institutional priority in the same year.¹⁰*

University Abdelhamid Ibn Badis Mostaganem was established in 1998. Previously, in 1969, the Institute of Agricultural Technology (ITA Mostaganem) was established, which trained Engineers in Applied Agronomy. In 1978, the University Centre of Mostaganem was established, which opened its doors to higher education in Biology, Common Core of Medical Sciences, and Chemistry. Since 1998, the infrastructure, capabilities, faculty, and student enrollment at the University Abdelhamid Ibn Badis Mostaganem have experienced a tremendous increase. With nine faculties and nearly 29,000 students, nearly 18,000 of whom are enrolled in bachelor's degrees, over 8,000 in master's degrees, over 800 in medicine, and 41 research laboratories, the university today brings together a diverse range of disciplines. There are approximately 350 international students representing approximately 25 nationalities, with the most common origins being Mali, the Sahara Occidental, and Palestine.¹¹

University Abou Bakr Belkaid Tlemcen was granted university status in 1989; it is a modern institution with a large library and numerous high-quality laboratories and computer centers. Notably, it has a large student body overall. The vast majority of its international students are undergraduates.¹²

University Badji Mokhtar Annaba, also known as Annaba University or UBMA, was founded in 1975. Seven faculties, 45,000 students, 2,210 lecturers, and 1,900 administrative and support personnel make up the university. Every year, over 8,000 students from the Arabic and Francophone worlds attend the institution, which is involved in a number of bilateral exchange agreements. There are 65 research laboratories and 400 active national research projects, and the research languages are Arabic, French, and some English.¹³

The establishment of **University Batna 2** dates back to 1977, when it was initially founded under the name of the University of Batna. A presidential decree mandated a reorganization in July 2015, resulting in the formation of two distinct universities: the University Batna 1 and the University Batna 2. The university is divided into eight faculties, each with numerous departments offering a variety of undergraduate and graduate degree programs. Research is an important aspect

⁸ http://www.univ-skikda.dz/index.php/fr/

⁹ https://www.timeshighereducation.com/world-university-rankings

¹⁰ https://www.univ-guelma.dz/

¹¹ https://www.univ-mosta.dz/presentation-2/

¹² https://www.univ-tlemcen.dz/fr

¹³ https://www.timeshighereducation.com/world-university-rankings

of the university's activities, with 1460 doctoral students, 25386 undergraduates, 1195 graduate students in 2022-2023, 1250 professors, and 28 research laboratories, including the Advanced Automation and Systems Analysis Laboratory, the Innovation Laboratory in Construction, Ecodesign, and Seismic Engineering, and the Risk Management Laboratory for Healthcare-Associated Infections. The university has collaborated with universities in Mexico, Japan, Romania, and Tunisia, as well as Singapore University Karawang in Indonesia and Hanyang University in Korea, to improve the student experience.¹⁴

The University Abderrahmane Mira Béjaïa was founded in 1983, counting 205 enrolled students. It took until 1992 for it to become a university center, with over 40,000 students by 1998. On eight faculties, the University has approximately 30 research laboratories, 45,700 students, 1714 teachers, and 1227 administrative and technical employees. It provides instruction in French, Arabic, and Tamazight. It promotes "sustainable development in harmony with globalization" through research centers for Innovation, Technology Transfer, and Food Technology. The leading Algerian university in the 2018 Nature Index is one of four Algerian participants, two of whom are universities, in the Erasmus SATELIT project to improve Maghreb higher education institutions' innovation ecosystems. Erasmus Mundus (4 Averroes programs, Green It, BATTUTA, and UNetBA), Tempus Meda (employability, tourism, communication, international relations, inclusive education), CMEP/Tassili, DEF/CNRS with France, and PCIM with Spain and Italy are among the exchange programs in which the university has signed over sixty collaboration agreements.¹⁵

Founded in 1984, the **University Mohamed Khider Biskra** encompasses several faculties offering a wide range of undergraduate and graduate programs. The University has seven faculties and institutes, 69 bachelor specializations and 65 doctoral specializations, 30567 graduate students from 9 nationalities, an 83% pass rate, 41 research laboratories, 31 international corporation agreements, 104 Erasmus+ mobility agreements, 32 national cooperation agreements, and 9 European projects.¹⁶

Overall ranking of the Top 10 Algerian universities in the Times Higher Education ranking

This study investigates the higher education landscape in Algeria by analyzing the performance of the Top 10 Algerian universities. The study accomplishes this by presenting their overall ranking in the Times Higher Education ranking as well as their performance in the sub-indicators in order to compare them to other universities that have achieved significant results despite not being ranked in the Top 10. In 2024, 86 Algerian universities entered the ranking, with only 23 ranked and 63 listed with "*reporter*" status, indicating that they provided data but did not meet the eligibility criteria for a rank, compared to 24 in 2023 and one in 2018. This represents a significant increase in Algerian universities with a strong academic reputation. Table 10 provides an overview of the Top 10 Algerian universities from 2018 to 2024.

Table 1: Top 10 Algerian universities according to the (2018-2024)

¹⁴ https://univ-batna2.dz/language/en/laboratories/

¹⁵ <u>http://www.univ-bejaia.dz/en/university/presentation/presentation</u>

¹⁶ https://univ-biskra.dz/

		DOI: 10.4//50/cibg.2023.29.04.005									
		University Djellali Liabès Sidi Bel- Abbès	University Ferhat Abbas Setif 1	University 20 Août 1955 Skikda	University 8 Mai 1945 Guelma	University Abdelhamid Ibn Badis Mostaganem	University Abou Bakr Belkaid Tlemcen	University Badji Mokhtar Annaba	University Batna 2	University Abderrahmane Mira Béjaïa	University Mohamed Khider Biskra
2024	Score	28.3	22.8- 28.2	22.8- 28.2	9.7- 22.7	9.7-22.7	9.7-22.7	9.7- 22.7	9.7- 22.7	9.7-22.7	9.7-22.7
2024	Ranking	1001- 1200	1201- 1500	1201- 1500	1501+	1501+	1501+	1501+	1501+	1501+	1501+
2023	Score		42.1- 44.9		18.4- 24.3	n/a	10.4-18.3	10.4- 18.3		10.4-18.3	10.4- 18.3
2023	Ranking		401- 500		1201- 1500	reporter	1501+	1501+		1501+	1501+
2022	Score		38.1- 40.8			n/a	10.6-22.3	10.6- 22.3		10.6-22.3	10.6- 22.3
2022	Ranking		501- 600	-		reporter	1201+	1201+		1201+	1201+
2021	Score		36.4- 39.7				10.3-25.0			10.3-25.0	
2021	Ranking		501- 600				1001+			1001+	
2020	Score		28.3- 35.2				10.7-22.1			22.2-28.2	10.7- 22.1
2020	Ranking		601- 800				1001+			801-1000	1001+
2010	Score		19.0- 25.9				9.8-18.9			19.0-25.9	
2019 -	Ranking		801- 1000				1001+			801-1000	
2018	Score						15.6-12.4				
2010	Ranking						801-1000				
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Source: https://www.timeshighereducation.com/world-university-rankings 2018-2024

It is noteworthy that several Algerian universities have recently joined the rankings. Prior to 2017, no Algerian university was included in THE rankings. University Abu Bakr Belkaid Tlemcen was included for the first time in 2017 and 2018, ranking 801+ and 801-1000, respectively. In 2019, the University Abderrahmane Mira Béjaïa ranked first, followed by the University Ferhat Abbas Setif 1, University Abu Bakr Belkaid Tlemcen, University Baji Mokhtar Annaba, University Frères Mentouri Constantine 1, and University Houari Boumediene of Science and Technology. With the inclusion of the University Mohamed Khider Biskra and University Houari Boumediene Oran in the 2020 rankings, Algeria had eight universities. University Blida 1 and University Mohamed Boudiaf Boumerdes joined the list in 2021, bringing the total to ten.

University Mohamed Boudiaf M'Sila, University Mai 8 1954 Guelma, University Abdel Ibn Badis Mostaganem, University Mohammed Seddik Benyahia Jijel, and University Mohamed Ben Ahmed Oran 2 were added in 2022, bringing the total to 15. According to Table 10, University Ferhat Abbas Setif 1 has consistently held the top position among Algerian universities in THE rankings from 2019 to 2023. It was ranked in the 500-401 range, followed by University 8 Mai 1945 Guelma, which remained unranked until 2023, when it was ranked in the 1201-1501 rank. University Oran 1 came in third, with a ranking of 1201-1500 in 2023 and 600-800 in 2022. In 2024, THE WUR ranks 23 Algerian universities, with University Djilali Liabès Sidi Bel Abbès

ranking highest in 1001-1200th place, followed by University Ferhat Abbas Setif 1. University 20 Août 1955 Skikda and University Batna 2 rank third and eighth, respectively.

In terms of specific indicators, the University Algiers 3 led the way with 47,132 students for 2024, closely followed by the University Algiers 1 with 45,616 students and the University Algiers 2 with 44,005 students. The number of students per staff at the University Center of Illizi was 44.6, followed by the University Center Morsli Abdellah of Tipaza (36.3) and the University Algiers (35.5). With 4% of international students, University Center Ali Kafi Tindouf ranked first, followed by the University Frères Mentouri Constantine and University Badji Mokhtar Annaba. At the same time, 16 universities tied for third place with a 1% rate. Teacher Education College of Setif ranked first with a female-to-male ratio of 93:7, followed by Ecole Normale Supérieure El Katiba Assia Djebar Constantine (ENSC) with a ratio of 93:7, and Ecole Normale Supérieure d'Oran with a ratio of 92:8. The performance of Algerian universities in 2024 THE WUR is encouraging, with several institutions moving up in the rankings and others entering for the first time. This ranking indicates that Algerian universities in the Arab and young university rankings, as well as the impact ranking.

	University Mohamed Boudiaf of M'Sila	University 8 Mai 1945 Guelma	University Abdelhamid Ibn Badis Mostaganem	University Abou Bakr Belkaid Tlemcen	University Batna 1	University Abderrahmane Mira Béjaïa	University Echahid Hamma El Oued	University Hassiba Benboulaili Chlef	University Mohammed Seddik Benyahia Jijel	University Kasdi Merbah Ouargla
Overall score	53.9- 59.6	7.9- 53.8	7.9-53.8	7.9- 53.8	7.9- 53.8	7.9- 53.8	7.9-53.8	7.9- 53.8	7.9-53.8	7.9-53.8
Arabuniversityrankings2022 rank	121-140	141+	141+	121- 140	141+	141+	141+	141+	141+	
Young university rankings 2023 rank	501+	401- 500	Reporter	501+	reporter	501+	reporter	reporter	Reporter	
Engineering and technology 2023 rank	1001+	601- 800		1001+		1001+				
Physical sciences 2023 rank	1001+	801- 1000		1001+		1001+				
Computer science 2023 rank				801+						
Impactranking:peaceandjusticeandstronginstitutions2023 rank	401-600	601- 800				601- 800		601- 800		
Impactrankingspartnershipsforthe goals:2023 rank	601-800	1001+	1001+	1001+	1001+	1001+	1001+	1001+	1001+	1001+

Table 2: Top 10 Algerian universities Arab, Young and impact rankings 2023

Source: https://www.timeshighereducation.com/world-university-rankings 2018-2024

Only twelve Algerian universities were ranked in the impact rankings. Table 2 shows the top ten universities, with the other two being the University Amar Telidji Laghouat and the University

Mustapha Stambouli Mascara. In the Arab ranking, the examined universities were ranked between 100 and 141+, and in the Young University ranking, they were ranked 401-501+. Only four universities made the Young University ranking: the University of 8 Mai 1945 Guelma, which ranked 401-500, and the Universities of Mohamed Boudiaf of M'Sila and Abou Bakr Belkaid Tlemcen, which ranked 501+. University 8 May 1954 Guelma received ratings of 601-800 and 801-1000 in engineering and technology and physics sciences, respectively, while the Universities Mohamed Boudiaf M'sila, Abou Bakr Belkaid Tlemcen, and Abderrahmane Mira Béjaïa received ratings of 1001+. Only Abou Bakr Belkaid Tlemcen University was ranked in the top 801 in computer science. In the indicator for peace and justice and strong institutions, the University Mohamed Boudiaf M'Sila, the University 8 Mai 1945 Guelma, and the University Abderrahmane Mira Béjaïa and Hassiba Benboulaili of Chlef were ranked 601-800 and 401-600, respectively. In the impact ranking partnership for the goals, the University Mohamed Boudiaf M'sila was rated 601+800, while the remaining universities were ranked 1001+.

Top 10 Algerian Universities Ranked by Times Higher Education Indicators (2018-2024)

In today's higher education system, university ranking is critical for students, educators, politicians, and other stakeholders all over the world. Algeria's diverse academic institutions have emerged as significant regional players in higher education. The Times Higher Education ranking indicators identify Algeria's top ten universities, which this study delves into in depth.

1. Teaching

The teaching indicator looked into how educational institutions were perceived. A high proportion of postgraduate research students indicates that a university is committed to developing the next generation of academics by providing high-level instruction that is appealing to graduates and effective in developing them. Because the number of Ph.D. awards varies by discipline, this metric has been standardized for each university's unique subject mix. The income of academic institutions is scaled with the number of academic employees and normalized for purchasing power parity (PPP). It represents an institution's overall status and gives students and staff a broad impression of the infrastructure and facilities available to them.¹⁷ The teaching (learning environment) is divided into five categories based on the changes in the sub-indicators in 2024 (Table 3).

Indicator	Reputation survey	Staff-to- student ratio	Doctorate-to- bachelor's ratio	Doctorates- awarded-to- academic-staff ratio	Institutional income	
Ratio 2024	15%	4.5%	2%	5.5%	2.5%	
Ratio 2018- 2023	15%	4.5%	2.25%	6%	2.25%	

Table 3: Components of the teaching indicator

Source: https://www.timeshighereducation.com/world-university-rankings,

Table 4 illustrates the ranking of the ten highest-performing Algerian universities in terms of teaching quality, covering the period from 2018 to 2024.

Table 4: Top 10 Algerian universities ranking according to the teaching indicator

¹⁷ https://www.timeshighereducation.com/world-university-rankings, accessed 30/03/2023

	DOI: 10.47750/CIDG.2023.29.04.005										
		Badji Mokhtar University Annaba	University Oran 1	Djellali Liabès University Sidi Bel- Abbès	University Mohamed Boudiaf Oran	University Abou Bakr Belkaid Tlemcen	University Frères Mentouri Constantine 1	University Kasdi Merbah Ouargla	Blida 1 University	University Mohamed Boudiaf of M'Sila	University of Science and Technology Houari Boumediene
	Score	34.1	30.7	30.6	24.6	22.7	20.2	20.0	19.6	18.1	17.8
2024	Ranking	1501+	1501+	1001- 1200	1501+	1501+	1501+	1501+	1501+	1501+	1501+
	Score	20.0	30.4		21.6	22.7	18.9		18.3	16.5	
2023	Ranking	1501+	1201- 1500		1501+	1501+	1501+		1501+	1501+	
	Score	17.4	30.2		17.5	25.2	20.7		16.3	20.8	
2022	Ranking	1201+	601- 800		1201+	1201+	1201+		1201+	1201+	
	Score		31.3		18.7	26.5	21.0		16.0		
2021	Ranking		801- 1000		1001+	1001+	1001+		1001+		
2020	Score				18.9	29.1	19.4				16.1
2020	Ranking				1001 +	1001 +	1001 +				1001 +
2019	Score	13.4				30.4	17.6				15.6
2019	Ranking	1001+				1001+	1001+				1001 +
	Score					27.9					
2018	Ranking					801- 1000				1.00/02/2	

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Source: https://www.timeshighereducation.com/world-university-rankings, accessed 30/03/2023

Examining the teaching indicator results of Algerian universities reveals that in 2024, the University Badji Mokhtar Annaba ranked first with a score of 34.1 after ranking sixth in 2023, followed by the University Oran 1 Ahmed Ben Bella with a score of 30.7 and both being ranked 1501+. In 2023, 2022, and 2021, the top spot was held by the University Oran 1. In contrast, in 2020 and 2019, the University Abou Bakr Belkaid Tlemcen received the highest ranking. These outcomes can be attributed to the unique characteristics of Algeria's university system. Algeria distinguishes itself through its free higher education system, which has increased social demand and university enrollment. This increase, however, is not proportional to the number of educators in the field, and there are poor working conditions and incentives. Furthermore, Algerian universities are funded by the state, which distinguishes them from the higher education systems of other countries, particularly the more advanced ones.

The new LMD system's shorter training cycle compared to the traditional system has encouraged many people to pursue higher education. Furthermore, higher education institutions have expanded and proliferated across the entire national territory, and the social context has shifted to place a greater emphasis on higher education and postgraduate studies. The Ministry of Higher Education has worked to increase and broaden the use of online education within the domestic higher education framework. This entails developing educational programs that result in certificates and other credentials that are specifically tailored to online education and lifelong learning. It also includes developing and disseminating educational materials via digital and virtual technologies, as well as meeting the diverse academic needs of various societal groups through adaptable and flexible training programs.

2. Research environment

The Times Higher Education ranking quantifies the number of Scopus-indexed academic journal articles per researcher, scaled for institution size and subject-normalized. The process reveals the University's ability to publish in prestigious peer-reviewed journals.¹⁸

Indicator	Reputation survey	Research income	Research productivity
Ratio 2024	18%	5.5%	5.5%
Ratio 2018- 2023	18%	6%	6%

 Table 5: Components of research environment indicator

Source: <u>https://www.timeshighereducation.com/world-university-rankings</u>

The annual Academic Reputation Survey primarily reflects a university's reputation for research among its peers. Based on the number of academic staff, research revenue is adjusted for purchasing power parity (PPP). This metric is contentious due to national policy and economic conditions. Income is critical to world-class research, and TME experts thought it was a reliable indicator because the majority of it is competitive and peer-reviewed. Because scientific research funding is generally more significant than that for the best social science, arts, and humanities research, this index is normalized to account for each University's topic profile.¹⁹ Table 6 displays the ranking of the ten most prominent Algerian universities based on their research performance spanning the years 2018 to 2024.

 Table 6: Top 10 Algerian universities ranking according to the research environment indicator

		-	-		•			м			
		Badji Mokhtar University Annaba	University Hassiba Benboulaili Chlef	Djellali Liabès University Sidi Bel- Abbès	University Mohamed Boudiaf of M'Sila	University Abou Bakr Belkaid Tlemcen	University Oran 1	University Mohammed Seddik Benyahia Jijel	University 8 Mai 1945 Guelma	University Mohamed Khider Biskra	Blida 1 University
	Score	16.2	12.3	9.3	9.2	9.0	9.0	8.8	8.6	8.6	8.6
2024	Ranking	1501+	1501+	1001- 1200	1501+	1501+	1501+	1501+	1501+	1501+	1501+
	Score	8.1	n/a		7.8	8.8	8.3	n/a	8.6	8.2	8.3
2023	Ranking	1501+	reporter		1501+	1501+	1201- 1500	reporter	1201- 1500	1501+	1501+
2022	Score	8.0			8.2	8.3	8.8	n/a	n/a	8.1	8.4
2022	Ranking	1201+			1201+	1201+	601+800	reporter	reporter	1201+	1201+
2021	Score					8.3	7.9			7.4	7.7
2021	Ranking					1001 +	801-1000			1001+	1001 +
2020	Score					8.8				7.3	
2020	Ranking					1001 +				1001+	
2019	Score	9.3				9.2					
2019	Ranking	1001+				1001 +					
	Score					8.0					
2018	Ranking					801- 1000					

Source: https://www.timeshighereducation.com/world-university-rankings2018-2024

¹⁸ https://www.timeshighereducation.com/world-university-rankings, accessed 30/03/2023

¹⁹ https://www.timeshighereducation.com/world-university-rankings, accessed 30/03/2023

According to Table 6, in 2024, the University Badji Mokhtar Annaba ranked first in the research environment indicator with a score of 16.2, followed by the University Hasiba Ben Bouali Chlef and the University Djilali Liabès Sidi Bel Abbès. In 2022 and 2023, the University Abderrahmane Mira Béjaïa was ranked first. In terms of the scientific research index, it was followed by the University Mohamed Khider Biskra, with the University Badji Mokhtar Annaba coming in third. Furthermore, the University M'Hamed Bougara Boumerdès ranked first in 2020, while the University Abou Bakr Belkaid Tlemcen ranked first in 2021. According to the MSERS, Algeria's scientific research network currently consists of 1779 laboratories, 30 research centers, 46 units, 31 experimental stations, and 4 agencies. Algeria has implemented measures to improve its research infrastructure and has made efforts to foster financial and institutional knowledge generation, with 61.277 university researchers.²⁰ It has also prioritized expanding its collaborations with the economic and social development sectors.

Algeria ranked 8 in the region ranking and 86 in the work ranking in 2023, according to the A.D. scientific index, with Djilali Liabes University ranking first as the best institution despite not ranking in THE general ranking. According to the same index, 6651 researchers have broken into the top 10,000. Three researchers are ranked in the top 3% globally, and 18 are ranked in the top 10% globally. With 165 researchers in the Top 10,000 Algeria researchers list and one in the top 3% globally, University Ferhat Abbas Setif has secured the second national position. The University 8 Mai 1945 Guelma, on the other hand, ranked sixth with 116 researchers, the University Abderrahmane Mira Béjaïa ranked seventh with 219 researchers, and the University Abu Bakr Belkaid Tlemcen ranked eighth with 217 researchers.²¹ Algeria's gross domestic expenditure on research and development (GERD) was 0.56% of the country's GDP in 2022. Research and development spending as a percentage of GDP increased slightly in 2020, from around 0.54%. In absolute terms, Algeria's gross research and development expenditure in 2022 was 2.76 billion US dollars.²²

3. Research quality

The research influence indicator, which contributes 30% to the overall university ranking, investigates the role of universities in disseminating novel knowledge and ideas by quantifying the mean frequency with which academics reference a university's scholarly publications on a global scale. Over 27,100 scholarly journals are indexed by Elsevier's Scopus database, and all publications indexed from 2017 to 2021 are included in the dataset. Citations for these publications from 2017 to 2022 have also been compiled. Citations are used to show how much each university contributes to the collective body of human knowledge. The statistics have been normalized to account for differences in citation volume across subject areas. This means that institutions with substantial research activities in fields with high citation counts do not gain an unfair advantage.²³ Table 7 illustrates the rankings of the ten highest-performing Algerian universities based on citation counts spanning from 2018 to 2023.

Table 7: Top 10 Algerian universities ranking according to the citation indicator

²⁰ Ministry of Higher Education and Scientific Research, Results of the Higher Education and Scientific Research Sector, 2021-2022
²¹ https://www.adscientificindex.com/country-ranking/

²² https://www.statista.com/statistics/1345241/gerd-share-of-gdp-in-algeria/

²³ https://www.timeshighereducation.com/world-university-rankings, accessed 26/10/2022

DOI: 10.47750/CID9.2025.27.04.005										00	
		University 20 Août 1955 Skikda	Ferhat Abbas University Setif 1	Djellali Liabès University Sidi Bel- Abbès	University Mustapha Stambouli Mascara	University 8 Mai 1945 Guelma	University M'Hamed Bougara Boumerdès	University Hassiba Benbouali Chlef	University Mohamed Khider Biskra	University Amar Telidji Laghouat	University Kasdi Merbah Ouargla
	Score	51.3	50.6	46.0	31.4	25.4	21.3	20.7	19.3	17.2	16.0
2024	Ranking	1201- 1500	1201- 1500	1001- 1200	1501+	1501+	1501+	1501+	1501+	1501+	1501+
	Score		94.7		n/a	41.3	24.0	n/a	16.8	n/a	
2023	Ranking		401- 500		reporter	1201- 1500	1501+	reporter	1501+	reporter	
	Score		93.8			n/a	16.1		12.9		
2022	Ranking		501- 600			reporter	1201+		1201+		
	Score		87.4				13.2		17.2		
2021	Ranking		501- 600				1001+		1001+		
	Score		73.0				11.1		14.0		
2020	Ranking		601- 800				1001+		1001+		
	Score		24.1								
2019	Ranking		801- 1000								
2018	Score										
2010	2018 Ranking										
Sour	ce: https://	/www.t	imeshi	phereduca	tion.com	/world-u	niversity-	rankings	2018-202	24	

P-ISSN: 2204-1990; E-ISSN: 1323-6903 DOI: 10.47750/ciba.2023.29.04.005

Source: https://www.timeshighereducation.com/world-university-rankings 2018-2024

The study focuses on the differences in research quality performance among universities, with a particular emphasis on the top institutions. Skikda University topped the ranking for the first time in 2024, according to the indicator. University Ferhat Abbas Setif has emerged as the leader in research citations from 2020 to 2023, with a significant lead over its competitors. Djellali Liabès University Sidi Bel-Abbès and Mustapha Stambouli Mascara are close behind. Notably, in 2019, the University Abderrahmane Mira Béjaïa took first place, followed by the University Abou Bekr Belkaid Tlemcen in 2018. Algeria ranked 56 in the Scimago journals and country raking, with 10689 papers published in 2022, 10387 cited papers, 9436 citations in wish 2273 are self-citations, and 0.88 citations per paper, and 222 in H-index, with an Arab contribution of 6.07% and an African contribution of 6.55%.²⁴ The primary obstacle to scholarly publication in Algeria is language, with researchers in the humanities and social sciences predominantly employing Arabic and French, while the exact sciences rely on these languages as well. Nevertheless, a notable trend has emerged wherein an increasing number of scholarly works are being published in the English language. This shift in publication practices potentially holds the potential to positively impact university rankings in relation to this particular indicator.

4. Industry

The industry, which accounts for 4% of the total THE score, signifies the University's ability to provide support to the industry through ideas, inventions, and guidance, which has emerged as a crucial objective of the contemporary global academic institution. This particular category aims to

²⁴ https://www.scimagojr.com/countrysearch.php?country=DZ

depict knowledge transfer endeavors by juxtaposing an institution's industry research income (adjusted for PPP) with the number of academic personnel it employs.

Indicator	Industry income	Patents
Ratio 2024	2%	2%

Table 8: Components of industry indicator

Source: https://www.timeshighereducation.com/world-university-rankings

The category serves as a measure of the financial commitment of corporations toward research and the ability of a university to secure funding from commercial sources. These factors are significant indicators of the overall quality and excellence of an institution.²⁵ The findings displayed in Table 9 illustrate the ranking of the ten most prominent Algerian universities in relation to their industrial relevance, spanning the years 2018 to 2024.

Table 9: Top	o 10 Algerian	universities	ranking ac	cording to t	he industry indicator
r					

		University Hassiba Benboulaili Chlef	University Abderrahmane Mira Béjaïa	University Abou Bakr Belkaid Tlemcen	University Frères Mentouri Constantine 1	University Houari Boumediene Sciences and Technology	University Mohamed Boudiaf M'Sila	University Oran 1	University Ferhat Abbas Setif 1	University Kasdi Merbah Ouargla	University Mohamed Boudiaf Oran
	Score	32.7	20.9	19.6	18.2	18.2	17.9	17.8	17.7	17.3	17.3
2024	Ranking	1501+	1501+	1501+	1501+	1501+	1501+	1501+	1201- 1500	1501+	1501+
	Score	n/a	36.9	37.0	37.5		37.7	37.6	36.9		37.0
2023	Ranking	reporter	1501+	1501+	1501+		1501+	1201- 1500	401- 500		1501+
	Score		34.8	34.9	35.4		35.7	35.3	34.8		34.9
2022	Ranking		1201+	1201+	1201+		1201+	601- 800	501- 600		1201+
	Score		33.4	33.5	34.3	33.5		34.2	33.4		33.6
2021	Ranking		1001+	1001+	1001+	1001+		801- 1000	501- 600		1001+
	Score		34.4	34.8	35.4	34.9			34.4		34.8
2020	Ranking		801- 1000	1001+	1001+	1001+			601- 800		1001+
	Score		34.0	34.1	34.8	34.0			34.0		
2019	Ranking		801- 1000	1001+	1001+	1001+			801- 1000		
2018	Score			31.9							
2010	Ranking			801-1000							

Source: https://www.timeshighereducation.com/world-university-rankings, 2018-2024

In the industry indicator for 2024, the University Hassiba Benboulaili Chlef came first, followed by the University Abderrahmane Mira Béjaïa and the University Abou Bakr Belkaid Tlemcen. In 2023, 2022, and 2021, the University Oran 1 ranked first in the industry income indicator. Despite efforts by higher education institutions and the Directorate General of Scientific Research and Technological Development (DGRSDT) to promote scientific research results, particularly by encouraging patents and their exploitation, the table results show that most universities are ranked

²⁵ https://www.timeshighereducation.com/world-university-rankings, accessed 30/03/2023

1501 or higher. The majority of patents are in the fields of renewable energy, physics, mechanics, electricity, electronics, metals, health, pharmaceutical industries, agriculture, hydraulics, and information technology.²⁶ According to the DGRSDT, 420 patents were granted in 2021, up from 347 in 2020 and 303 in 2019. In the field of patents, there were 36 active university institutions in 2020, with the University Saad Dahlab Blida leading the way with 20 patents, followed by the University of Science and Technology Houari Boumediene with 15 patents. The University Ferhat Abbas Setif came in third with 14 patents in the same year. During the same year, the universities of Biskra, Médéa, Mostaganem, and Chlef registered 10, 7, 5, and 1 patents, respectively.

In 2020, there were 158 patent applications filed, compared to 140 in 2019. With 20 applications in 2020 and 2019, the University Blida 1 submitted the most patent applications in physics, mechanics, chemistry, and aviation. Houari Boumediene University of Science and Technology followed with fifteen applications in 2020 and 2019. The University Ferhat Abbas Setif ranked third in technology, industry, and electronics, with 14 applications in 2020 and 9 in 2019; 135 patents were issued by research laboratories in 2020. Algeria received a 16.7 out of 100 on the Global Innovation Index in 2022, ranking 115th out of 132 countries included in the study; the country ranked 121st in 2020. The Global Innovation Index ranked institutions 99th, human capital and research 82nd, infrastructure 102nd, knowledge and technology outputs 118th, and creative outputs 109th globally.²⁷

Algeria ranked 49th with a score of 51.24/100 in the Bloomberg Innovation Index for the first time among the top 60 economies with the most innovative economies in the world. It received a 54 for the indicator "number of researchers compared to population" and a 51 for the indicator "investment in research."²⁸ Algerian universities' roles are still limited to research and development and patenting for industry. Contractual and partnership research do not exist in Algeria owing to a lack of industry interest in such projects. Opportunities for consulting are also limited because university professors and researchers are not legally permitted to enter into such contracts. According to the DGRSDT, this reality stems from two distinct phenomena: top international researchers, and national researchers are not always well tutored, supported, and encouraged to produce patents.²⁹

5. International outlook

The modern international academic community places a significant emphasis on supporting various industries by means of fostering innovation, generating novel inventions, and providing consultancy services. This category assesses knowledge-transfer activity by comparing an institution's research income from industry (adjusted for purchasing power parity) to its academic staff. The category indicates a university's ability to attract commercial funding and the willingness of businesses to fund research, both of which are indicators of institutional quality.³⁰ The findings

²⁶ Najoua Benouaida, Higher Education in Algeria Between the Reality of Reforms and the Requirements of Human Development, PhD Thesis in Business Administration and Sustainable Development, University of Ferhat Abbas Setif 1, 2018/2019, P 216.
²⁷ Global innovation index, WIPO, 2022.

²⁸ Statistics on Intellectual Property Titles of Algerian Researchers, DGRSDT, 2020

²⁹ Samah SOULEH, higher education and scientific research sector in Algeria: What kind of challenges and changes that are required for a better system? European scientific journal, Edition ISSN: 1857-7881, 2017, P37-38.

³⁰ https://www.timeshighereducation.com/world-university-rankings, accessed 30/03/2023

displayed in Table 10 provide an overview of the highest-ranking Algerian universities in relation to their international perspective from 2018 to 2023.

Indicator	Proportion of international students	Proportion of international staff	International collaboration
Ration 2024	2.5%	2.5%	2.5%
Ratio 2018-2023	2.5%	2.5%	2.5%

Table 10: Components of International Outlook Indicator

Source: https://www.timeshighereducation.com/world-university-rankings,

Table 11: Top	10	Algerian	universities	ranking	according	to	the	International	Outlook
indicator									

		University Mouloud Mammeri Tizi- Ouzou	University Abderrahmane Mira Béjaïa	University Mustapha Stambouli Mascara	University Hassiba Benboulaili Chlef	University 20 Août 1955 Skikda	University Amar Telidji Laghouat	University Oran 1	University Ferhat Abbas Setif 1	University Frères Mentouri Constantine 1	University Mohamed Khider Biskra
2024	Score	45.4	44.9	43.2	41.9	40.6	39.7	39.7	39.6	38.3	38.1
	Ranking	1501+	1501+	1501+	1501+	1201- 1500	1501+	1501 +	1201 - 1500	1501+	1501+
2023	Score	44.9	43.2	n/a	n/a		n/a	39.5	40.0	37.6	35.7
	Ranking	1501+	1501+	reporter	reporter		reporter	1201 - 1500	401- 500	1501+	1501+
2022	Score		42.8					39.5	40.8	38.0	34.8
	Ranking		1201+					601- 800	501- 600	1201+	1201+
2021	Score		43.1					40.4	41.2	37.7	34.1
	Ranking		1001+					801- 1000	501- 600	1001+	1001+
2020	Score		43.1						41.8	37.8	32.5
	Ranking		801- 1000						601- 800	1001+	1001+
2019	Score		43.0						42.1	37.5	
	Ranking		801- 1000						801- 1000	1001+	
2018	Score										
	Ranking										

Source: https://www.timeshighereducation.com/world-university-rankings 2018-2024

The indicator focuses on how rankings have changed over time, highlighting universities that have excelled in their international orientation. According to the table, Mouloud Mammeri University Mouloud Mammeri Tizi Ouzou has taken the top spot in the global outlook indicator for 2024 and 2023. The University Abderrahmane Mira Béjaïa and the University Mustapha Stambouli Mascara will follow suit. Notably, Ferhat Abbas University Setif 1 held the top spot in 2020, demonstrating the fluidity of these rankings. In 2022, 2021, and 2019, the University Abderrahmane Mira Béjaïa was consistently ranked first. Despite the significant contribution of international student enrollment in higher education institutions to the internationalization and diversity of educational environments, according to the MSERS, only 7,200 international students were

enrolled, with 539 students joining during the academic year 2021-2022. According to the SJR³¹, international collaboration accounted for 48.88% of scientific research in 2022. International students are enrolled at institutions other than the University. The issue is inextricably linked to the concepts of political stability and government relations between the countries involved in the student movement. Before treating it as a significant criterion for ranking, THE ranking system should ensure that these elements are considered.³²

Findings discussion

An in-depth review of Algerian universities using Times Higher Education ranking indicators provides interesting insights into the state of Algerian higher education. The Times Higher Education ranking is widely regarded as a reliable benchmark for assessing the performance of universities worldwide. When examining the performance of Algerian universities within this framework, several critical points emerge.

- The state assumes a dominant role in managing the higher education sector under the centralized education system. However, this approach complicates management, resulting in excessive time consumption, loss of control and financial resources, and a potential lack of credibility. These factors can then affect the quality and productivity of higher education. The concentration of decision-making authority within the "Trusteeship" hierarchical structure fosters the emergence of specific imbalances concerning actual circumstances, which frequently diverge from the decision-makers' perspective.³³
- A lack of clear objectives, scientific research strategies, and straightforward program plans that precisely define its goals and role in global development and solving societal problems.
- Government and private research funding is insufficient due to a lack of understanding and definition of the role of research in achieving both sectors' strategies, whether it is economic independence, food security and citizen welfare, or improving living conditions.³⁴
- Without financial support and secure living conditions for scholars and researchers, the university environment is not conducive to research. Many scholars are burdened with daily issues concerning their duties, career advancement and its requirements, and obtaining funding.
- In research laboratories, a lack of basic equipment and cutting-edge technology is impeding scientific research and the development of prototype inventions.³⁵
- The inability of research centers to collect financial wealth through the marketing of their products and the receipt of financial income in exchange for the innovations and inventions they produce.
- Researchers face difficulties and obstacles in obtaining the necessary statistics and data, particularly those related to and released by official authorities, to complete their research.

³¹ https://www.scimagojr.com/countrysearch.php?country=DZ

³² Farzana Anowar, Mustakim A. Helal, Saida Afroj, Sumaiya Sultana, Farhana

Sarker, and Khondaker A. Mamun, A Critical Review on World University Ranking in Terms of Top Four Ranking Systems, lecture notes in electrical engineering book series, volume 312, Springer International Publishing Switzerland 2015, P 565

³³ Samah SOULEH, higher education and scientific research sector in Algeria: What kind of challenges and changes that are required for a better system?, European scientific journal, Edition ISSN: 1857-7881, 2017, P40

³⁴ Laala Boukemiche, Obstacles to the Employment of Scientific Research in Development in the Arab World, in the Academy Journal for Social and Human Studies, Issue 12, 2014, P04-05

³⁵ Hussein Khattab, The Reality of Scientific Research in Algeria and Its Obstacles, Case Study of a Sample of Professors and Postgraduate Students, in the Journal of Community Education and Work, Issue 03, June 2017, P 123.

This has an impact on the credibility and accuracy of research in analyzing current reality in order to develop practical and effective solutions to various national and local challenges.

- To streamline and simplify administrative procedures, the ecosystem must create a single point of contact for researchers to submit proposals and receive feedback, create a more efficient system for evaluating and approving proposals, and put in place a more transparent system for reporting project progress. It will make it easier for scientists to obtain funding and conduct research. This would ultimately improve the effectiveness and productivity of Algeria's research environment.
- The lack of connection between research conducted and current issues confronting the country, where it remains locked up in drawers, and the lack of focus on applied research that meets the requirements of economic and social phenomena, such as market requirements.
- Algerian universities are young in comparison to other universities in the rankings, which has an impact on their performance. The presence of three languages for publication in these universities, Arabic, French, and English, has also influenced the visibility of published scientific research. On the other hand, the availability of free education to a large number of students has had an impact on universities' ability to provide quality training at various levels.
- The Arab intellectual's belief in the Westernness of science is ideological, considering science to be of Western heritage and limiting Arab efforts to translate that output and import Western scientific progress and technology. Development, on the other hand, is frequently viewed as economic and social characteristics imported from developed countries.³⁶
- Algeria suffers from brain drain, as many of the country's best and brightest students and academics leave to work in other countries. This makes it difficult for Algerian universities to compete with the best universities in the world.

Conclusion

The analysis of Algerian university rankings in the Times Higher Education ranking has provided valuable insights into the country's higher education landscape's strengths, challenges, and opportunities. This article examined the factors that contribute to Algerian universities' performance in global rankings, as well as the implications of their placement within THE ranking. The findings emphasized the importance of a multifaceted approach to improving Algerian universities' global standing. While some institutions demonstrated commendable accomplishments in certain areas, key indicators such as research output, international collaboration, and academic reputation still have room for improvement. Addressing these issues requires a collaborative effort from a variety of stakeholders, including universities, government agencies, and the private sector.

Furthermore, the analysis highlighted the significance of implementing holistic strategies centered on academic excellence and broader aspects of university development. Fostering a research culture, encouraging innovation and entrepreneurship, promoting international

³⁶ Abdelkader Nashadi, The Reality of Scientific Research in Algeria - A Critical View -, in the Professional Journal of Sports Science and Social and Human Sciences, Issue 1, Volume 9, 202, P 51-52.

exchange programs, and bolstering faculty development initiatives could all be part of these strategies. Improving infrastructure, research funding, and cultivating a vibrant academic community are critical steps on the path to higher global rankings. The debate over Algerian university rankings in the Times Higher Education ranking is more than just an academic exercise; it reflects the country's commitment to providing quality higher education and contributing to the global knowledge economy. Algeria can strategically position its universities internationally and foster an environment conducive to academic and research excellence by leveraging the insights from this analysis.

Recommendations

This study emphasizes the significance of continuous evaluation and improvement in improving Algerian universities' global competitiveness. The issues raised should spark constructive dialogue and collaborative efforts among stakeholders in order to elevate the status of higher education in Algeria. As it works toward these objectives, the country is poised to carve out a significant niche in the global academic community, enriching its academic offerings, research contributions, and overall socioeconomic progress.

- Rankings can be a useful tool for facilitating comparisons and improving understanding of higher education institutions. However, it is critical to recognize that rankings should not be used as the primary method of assessing the value and impact of higher education. Instead, they should be regarded as supplementing the efforts of governmental bodies, accrediting organizations, and independent review agencies.³⁷
- It is necessary to assess educational objectives on a regular basis to ensure that they are consistent with long-term development goals and the criteria established by international ranking systems. This evaluation should prioritize educational content relevant to real-life experiences, incorporate pedagogical approaches that promote active learning, provide appropriate educational resources for effective learning, and use transparent and objective evaluation criteria.
- The current administrative procedures in Algeria for monitoring research initiatives are complex and time-consuming. This can lead to project delays as well as a lack of transparency and accountability. To address this issue, it is proposed that administrative procedures for monitoring research initiatives be streamlined and simplified. This could be accomplished by creating a centralized point of contact for researchers to submit proposals and receive feedback. Developing a more efficient system for reviewing and approving proposals, as well as implementing a more transparent system for reporting on project progress, will make it easier for scientists to obtain funding and conduct research. This would ultimately improve the effectiveness and productivity of Algeria's research environment.
- Scientific research efforts should be viewed as a long-term strategic investment that necessitates the establishment of appropriate systems to ensure resources and time. This underscores the need for the implementation of suitable mechanisms to promote it. Scientific research, on the other hand, should be relevant and directed toward meeting development needs in all aspects, as it plays a critical role in advancing society. This entails

³⁷ College and university ranking systems, global perspectives and American challenges, institute for higher education policy, 2007

concentrating on pressing issues in people's lives, such as education, health, and the environment.

- The imperative is to precisely define the role of research laboratories, align their efforts toward specific goals, ensure the funding and valuation of scientific research, and establish national centers of excellence for scientific research.
- Establish a national research network and connect it to Arab and international laboratories to track scientific research developments.
- Provide the mechanisms required to foster and sustain an environment that cultivates and empowers students with the ability to innovate and achieve exceptional results.
- Restore competencies rather than allowing them to emigrate by creating favorable material and financial conditions for the retention of scientific and research competencies.
- Focus on the research problems that economic institutions require, the solutions to which will contribute to the achievement of development and progress in various sectors and will return financial support to research institutions through the activation of mechanisms for joint work between economic institutions and research institutions at multiple levels.

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