

Adnan Badran *Chief Editor*  
Elias Baydoun · John R. Hillman  
*Editors*

# Universities in Arab Countries: An Urgent Need for Change

Underpinning the Transition to a  
Peaceful and Prosperous Future



 Springer

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# Foreword

On an historic day, 29 November 2016, the United Nations Development Programme launched its 2016 Arab Human Development Report, subtitled *Youth and the Prospects for Human Development in a Changing Reality*, at a special event held at the American University of Beirut that brought together more than 200 constituents including students and academics from across the Arab world, alongside representatives from civil society, NGOs, government institutions, media, and the private sector. Notwithstanding the talent, energy and dynamism on show in the auditorium, the report made for daunting reading: the halving of growth in the human development index in Arab countries since the outbreak of political instability in 2010; growing inequality; conflict destroying the social fabric of the Arab region; high youth unemployment; low political engagement among the generation that will inherit us; pervasive discrimination against women. “The lives of many young people across the region are marked by frustration, marginalization and alienation from institutions and the transitions that are necessary to begin adult life in a fulfilling manner,” it warned. The AHDR 2016 called for a new model that focuses simultaneously on building young people’s capabilities, by reforming policies and services that affect education, health and their ability to earn a living, and expanding opportunities by addressing macro-level challenges in the political and economic spheres.

With little time to digest the sobering UNDP data released that day, but aware that this was a decisive intervention in our joint efforts to build a better future, I folded up my scripted welcoming remarks and launched into a sobering review of the economic, societal and political situation in the Arab world today, before segueing into my sincerely held belief that Arab higher education, with AUB as a super-ordinate model, and its fruits, represent the best hope for an emerging generation ravaged by self-doubt, exclusion, suppression and expatriation. Arab youth want what they need, which is education and empowerment, I told my audience. I spoke with genuine optimism because our youth has a sense of resiliency; a sense that they are not waiting for a grand intervention to save them. “They want us to help them. But they don’t want saving,” I said. “They want support; they want opportunity; they want to save themselves. They are not relying on dictatorships and autocratic states to create opportunities. They want to create their own opportunities. So, to us

in the universities, to you in the UN, to all of us, our job is to remove the roadblocks and to empower youth, to engage them, to educate them.” I can say with the conviction of someone who has treated some of the deadliest cancers for his entire career that this generation is going to make a difference. We know they can do marvels, because we see it every day. This volume picks up that challenge with some of our most eminent researchers and academicians in the Lebanese, Arab and international spheres sharing their thoughts and data on the key questions and challenges that we face, united under the standard of “an urgent need for change.” Never have those words rung more true, and I heartily commend His Excellency Dr. Adnan Badran and his partners for bringing together these insightful essays for our consideration.

President  
American University of Beirut,  
Beirut, Lebanon

Fadlo R. Khuri

# Introduction

Data published by authoritative organisations such as the United Nations in the Arab Human Development Reports, the World Bank, and reports of the International Labour Organisation highlight that nearly all Arab countries continue to be classified as “underdeveloped”, with widespread poverty and a propensity to severe social unrest. The birth rates are relatively high and the labour force continues to grow rapidly, but there are high levels of hidden and conspicuous unemployment. Prior to 1960, most of the 22 Arab countries had some of the lowest levels of socio-economic development worldwide, and since that time progress has fallen behind that of developing countries in Asia and other part of the world. There has been a prolonged failure to capitalise on industrialisation and exports of value-added products throughout the Arab Region, a land area of more than 13 million square kilometres stretching from its westerly edge at the Atlantic Ocean to its easterly edge at the Arabian Sea, and from the southern edge of the Mediterranean Sea south to the Horn of Africa. Likewise, insufficient attention has been given to the creation of wealth-creating intellectual property and its exploitation. With the exception of the few wealthy oil-exporting countries in the Gulf region, inadequate access to fresh water, food shortages, and a lack of energy security afflict significant proportions of Arab populations. Adding to the economic and environmental difficulties faced by all Arab nations are the spectre of civil war and conflicts, including attempted cultural genocide and population displacement, all interlaced with religious fundamentalism and ethnic incompatibilities. Authoritarian governments, lack of strong civil-society institutions, wide disparities in wealth, and a fragile political fabric coupled to weak national economies do not bode well for the future unless concerted efforts are made to offer a bright future for the people in general, numbering about 460 million, and the young in particular.

Even the wealthy oil-exporting nations with their massive accumulated sovereign assets are coming under economic and social pressures arising from depressed oil prices as new sources of oil and gas come on stream, notably from hydraulic fracturing of oil- and gas-bearing rock formations in other parts of the world. Further challenges come from greatly improved energy efficiency in industry, transport, and the home, as well as from rapid improvements in renewable-energy generation.

In the modern era, universities have a pivotal role in shaping the future and transforming societies. As centres of advanced education and scholarship they produce graduates and postgraduates to populate government and civil society. They conduct original research, and act as custodians of cultures, knowledge, and moral integrity. They have the potential to be at the forefront of enhancing the quality of life and leading in the quest to promote national wealth creation. Indeed, the future of the Arab world is dependent in large measure on the quality as well as quantity of the outputs from its university sector.

As in the world at large, Arab universities have experienced a massive growth in undergraduate numbers, posing a problem for the funding of public universities by governments but offering opportunities for private universities to address expanding market demands for advanced education. Most Arab countries are developing a mixed educational model of public and private universities. With the advent of international ranking tables and greater competitiveness, the deficiencies of Arab universities are becoming manifest at a time when education and training are being revolutionised by major developments in highly sophisticated online courses, some of which are freely available. None of the Arab universities figures in the listing of the leading global universities. Relatively little intellectual property of merit is produced and few spinout companies have been generated. High levels of graduate unemployment in the Arab countries can be regarded as an indictment of both the university sector and national economic management. The need for change has never been greater.

This book uniquely focuses on the Arab universities, detailing the challenges they face, considering the option for change, and outlining opportunities to thrive in a highly competitive world. In successive annual international meetings of the Arab Academy of Sciences, it has been clear that most universities in the Region are failing to adjust to rapidly changing circumstances in academia. Many of the brightest young graduates leave the Region to pursue their careers in the rest of the world, giving rise to a worrying “brain drain” of much-needed talent. There was a groundswell of opinion in these Academy meetings to produce this book as a matter of urgency using authors with special international expertise in academia, advanced research institutes, and government, and offer possible roadmaps for the diversity of Arab universities in their quest for improvement, and perhaps even for survival for some. Comparisons with leading universities in developed countries demonstrate that most Arab universities fail to meet the substantive requirements of their students and their parents, their staff, and the countries in which they operate. Clearly, Arab universities have more to gain than those in other parts of the world by analysing, adopting, and exploiting recent developments in teaching and developing a vibrant research community. The modern academic environment now encompasses entrepreneurialism, distance and blended learning for students of all ages and backgrounds, sophisticated facilities, external advice, and links with professional bodies and companies in the host country and abroad, thereby promoting the growth of a knowledge economy and lifelong learning. Crucially, leading universities in developed countries operate openly and transparently by providing open access to substantial levels of information. They also operate with a great deal of autonomy.

This book explores and evaluates major issues and opportunities in Arab academia. It opens with an overview chapter (*Hillman & Baydoun: The Future of Universities in the Arab Region: A Review*) that outlines the origins and purpose of universities, describing the structures and governance of institutions of higher education and research. The need for science parks and company-incubator facilities is analysed, followed by suggestions as to how the wellbeing of the Arab university sector and its relationship to government can be restored to its proper position. Recommendations are made on governance and managerial issues, setting priorities, and options are outlined for adopting quality-assurance measures and improving societal relevance. The next chapter (*Waterbury: Governance of Arab Universities: Why does it Matter?*) deals specifically with the crucially important issue of governance and autonomy of Arab universities currently and in times past, and offers advice to both universities and governments. In the third chapter (*Badran: Landscape of Higher Education in the Arab World: Quality, Relevance, and Student Mobility*), higher education throughout the Arab world is reviewed in detail, focusing on quality of education provided, its relevance to the needs of society, and the issue of student mobility. There is a gross underinvestment in STEM-based subjects (science, technology, engineering, and mathematics).

Research is a fundamental feature of any institution that claims university status. Thus, in Chap. 4 (*Badran: Landscape of R&D in the Arab Region Compared with the Rest of the World*) comparisons of research and development in Arab countries are made with the rest of the world, highlighting deficiencies in the levels of investment and the way in which investments are utilised. Chapter 5 (*Atta-ur-Rahman: Building a Knowledge Economy*) relates research that leads to a functioning and successful knowledge economy, providing a widely admired case study in leadership and government-university partnership in Pakistan. Fully utilising the skills and talents within universities for the betterment of both the university and society at large is a primary responsibility of all senior academics. Chap. 6 (*McKellar: Business Engagement is No Longer an Optional Extra for Universities*) makes the crucial point that engaging with business is no longer an optional extra for virtually all universities around the world. Such engagement brings benefits beyond financial security because it ensures that at least part of the work of the university sustains societal relevance, and its graduates and postgraduates have the necessary attributes to be readily employable. For various reasons, not all research and scholarship produced in the Arab world is used, and this aspect is analysed mainly from the standpoint of the social sciences in Chap. 7 (*Hanafi: Knowledge Produced but Not Used: Predicaments of Social Research in the Arab World*).

Uncomfortable as it is for those universities struggling to adapt to modernity, young people around the world are proving to be competent in computing and using smartphones for social media and accessing information. Access to the Internet means that before they submit applications for admission, they are able to compare institutions using their websites and internationally available ranking lists. Within the education and research environments, the availability online of high-quality teaching materials delivered by internationally acclaimed experts puts pressure on the staff of universities to raise their standards and improve the competitiveness of

their institutions. At the same time, universities need to update and substantially revise their websites. Chap. 8 (*Sebaaly: Online Education and Distance Learning in Arab Countries*) presents an account of recent and exciting developments in online education and distance learning in Arab countries, and notes the profound reshaping of teaching, training, and research currently taking place. Production of these sophisticated online tools demands a spectrum of skills normally beyond the capability of a single person.

Debate on what constitutes a balanced university-level education, one that equips students to be curious, questioning, and be willing to pursue knowledge, has not reached a unanimous position, but in Chap. 9 (*Guessoum: Is Liberal Arts Education a Good Model for Arab Universities?*) the question as to whether a liberal arts education is a good role model for Arab universities is carefully and positively examined. Especially in the Arab world, religion occupies a prominent position in society at large and particularly in education at all levels, most notably in respect of the interface between rapid and dramatic advances in modern science and religion. In Chap. 10 (*Guessoum: Science and Religion Issues in Higher Education*), this science-and-religion interface is adroitly examined with specific reference to Arab academia. Chap. 11 (*Sabra: Christianity and Science: From Conflict and Divorce to Mutual Influence and Enrichment*) concerns Christianity and science and examines whether the strained relationship in times past has given way to mutual enrichment. As food security has special resonance in most of the Arab world, Chap. 12 (*Daghir: Higher Agricultural Education in the Arab World: Past, Present, and Future*) reviews advanced agricultural education in the Region, noting previous arrangements and how they have evolved into the present system, followed by analysis of the challenges that need to be addressed in future.

Country-specific chapters illustrate issues that have relevance throughout the Region. Chapter 13 (*Badran: Who Pays What for University education in the Arab World Compared with the Rest of the World: Context of Jordan*) discusses the costs of university education in the Region compared with the rest of the world, and relates the costs and processes to the situation in Jordan. This account is then followed by Chap. 14 (*Kanaan: The Political Economy of Higher Education in Jordan: Cost-Sharing Revisited*) on the political economy of higher education in Jordan, with specific reference to cost-sharing arrangements. University reform in the Maghreb countries presented in Chap. 15 (*Benjelloun: University Reform in the Maghreb Countries: Institutional Autonomy as a Lever for National development*) emphasises the point that institutional autonomy, as analysed in Chap. 2, is an effective lever for national development and social progress. The loss of talent from Arab countries to the rest of the world – the “brain drain” – is a serious issue for the Region but in Chap. 16 (*Badr: Reversing the Brain Drain in Healthcare Education in Lebanon: A Success Story*) there has been a successful reversal of this undesirable phenomenon with respect to academic-led healthcare in the Lebanon. Finally, in Chap. 17 (*Mourtada: The Syrian Higher Education Sector: Past, Present, and Future*) the higher-education situation in Syria is reviewed from its development up until the war, its current complex state of affairs, and prospects for the future taking into account the special circumstances the country faces.

We are preparing to publish another book on Arab universities, concentrating specifically on both quality-assurance measures and societal and economic relevance in academia. These two areas – quality and relevance - are pivotal to the future of Arab universities that have increased substantially in number to more than 700 public and private universities without a concomitant improvement in the competitive position of the Region relative to other parts of the world. Greater prominence of quality assurance and relevance in the reform of its universities will ensure the Arab world truly realises its full potential.

Finally, we acknowledge with gratitude financial assistance from the University of Petra, Jordan.

Adnan Badran  
Elias Baydoun  
John R. Hillman

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# The Future of Universities in the Arab Region: A Review



John R. Hillman and Elias Baydoun

**Abstract** In the modern era, progress in societal development and economic growth is dependent to a large extent on the quality and impact of the university sector. This chapter provides an overview of the origins and roles of universities and the main issues and opportunities they face in the Arab Region, together with constructive suggestions for improvement. With the focus on education, science, and research, the relationships of universities to their societies and their governments are examined, considering university organisation and economic roles as well as the phenomenon of degree devaluation. International university rankings are reshaping university operations, raising questions about the standards of governance and administrative competence in addition to the nature of taught courses and their quality and value for money. Staff recruitment, retention, gender equity, and citation metrics demand special attention, as does the profound reshaping of education by online coursework for teaching, training, and research in an era of a new generation of computer-savvy young people and the need for lifelong learning for all age groups, thus extending the open-university concept. Website upgrading is essential for transparency and a key marketing issue for improving competitive positioning. Common features of successful universities are described. University-linked science parks and incubator facilities are having far-reaching effects on national economies elsewhere in the world and are beginning to be significant attributes of some Arab universities. Audits of intellectual property and competencies are needed. In the final section of the chapter, the potential of Arab universities to drive the transition to a knowledge-based thriving economy is described, addressing specific issues of governance, staffing and its associated career development, access to resources, participation in learned societies, and combatting corruption. Institutions claiming university status must address several specific issues. Priorities should be set at institutional, national, and regional levels involving governments, universities, and

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businesses so as to optimise the disbursement of precious resources. This could involve the possible establishment of regional specialist facilities. Research opportunities are outlined, noting the importance in the Region of insecure water, food, and energy supplies. The pivotal issues of relevance and independently conducted quality-assurance measures are examined, as is the need to track graduate and post-graduate careers. Recommendations made in this chapter have wider applicability to universities and advanced research institutes around the world.

**Keywords** Arab universities · Governance and management · Teaching and research · Science parks · University rankings · Online courses · Quality assurance · Accreditation · STEM subjects · Relevance

## 1 The Arab Region

Often regarded as synonymous with the Arab world, the Arab Region normally refers to the Arabic-speaking 22 states and territories of the Arab League, namely Algeria, Bahrain, Comoros, Djibouti, Egypt, Iraq, Jordan, Kuwait, Lebanon, Libya, Mauritania, Morocco, Oman, Palestine, Qatar, Saudi Arabia, Somalia, Sudan, Syria, Tunisia, United Arab Emirates, and Yemen (Hourani 1991; Arab World 2017; Arab League 2017). Arab League countries have a land area in excess of 13 million square kilometres and have a collective Gross Domestic Product (GDP) in excess of \$3 trillion, with huge variations between countries of GDP per capita (e.g. \$542 in Somalia versus \$102,000 in Qatar) (World Bank Reports on the Arab World 2017).

There are distinct ethno-religious and ethnic minorities living in the Region that do not necessarily consider themselves as Arabs per se (e.g. Assyrians, Berbers {Shawiya, Kabyle, Mozabite, Chenoui, Tuareg, Chelha, Zenata, Riffians, Chleuhs, Imazighen, Tamazret – Djerbi and Matmata, Chenini-Douiret, Nafusi, and Siwi}, Caucasians and Circassians, Chaldeans, Kurds, Yezidis, Syriacs, Druze, Mandaean, Shabats, etc.), but speak Arabic. Arab minorities exist in the Horn of Africa, Sahel, and Turkey, and Arabic is an official language in Chad and Eritrea. Arabic is also the primary language of religion in Afghanistan, Bangladesh, Indonesia, Iran, Pakistan, and some former Soviet Union republics. Thus, the Arab Region has a direct influence on neighbouring countries as well as a global influence culturally and economically with its extensive diaspora. According to numerous reports from several sections of the United Nations, education and national development are pressing issues common to the Region (United Nations Development Program Arab Human Development Reports 2017). It is also a region of profound political, religious, and social unrest, leading to unstable nation states, conditions that jeopardise the future of young Arabs and, indeed, more mature Arabs seeking self-improvement. According to the International Labour Organisation, the unemployment rate for 15- to 24-year-olds (classified as “youth” unemployment and includes graduates in that age range) is forecast to rise to over 30% in 2016 in Arab states, and even a large portion of those in employment are living in extreme or moderate poverty (International Labour Organisation 2017). This environment is unfavourable for

progress but universities that are properly organised and operated can offer hope for a better, more prosperous, and stable future. Even the better Arab universities have substantial room for improvement at all levels, and there is evidence that some of the better ones are showing worrying signs of corruption, complacency, and poor management.

Population estimates in the Region are dependent on the veracity of official census data, and are now deeply affected by the effects of conflict, population displacement, and flows of migrants and refugees. Together with estimates of population growth rates, net reproduction rates, and demographic projections, such estimates are subject to substantial amendment. Most estimates of the population in the Arab Region posit a figure of around 360 million by mid-2015 (The World Bank. Arab World 2017, see also Sect. 4.2), and could be approaching 390–400 million including the diaspora at the present time. Arab countries vary widely in their patterns of Y-chromosome haplotypes demonstrating genetic diversity (Y-DNA Haplotypes in Populations of the Near East 2017). The eight larger countries (Egypt, Algeria, Sudan, Iraq, Morocco, Saudi Arabia, Yemen, and Syria) have estimated average population doubling time of 31 years, and the Arab world is expected to add over 100 million by 2025. The annual population growth rate of 1.8% compares with the global average of 1%, ensuring an expanding population of potential university students within not only the indigenous populations but in the cohorts of migrants and refugees that desperately need educating and hope (Health Nutrition and Population Statistics: Population Estimates and Projections 1960).

## 2 What Are Universities For?

### 2.1 Education

Education lies at the heart of universities. It is the process by which society or a component of society transmits its knowledge (theoretically, its accumulated knowledge), skills, values, perceptions, preferences, behaviours, and sometimes prejudices vertically from one generation to another, and/or horizontally across generations. It involves teaching (or instruction when directed to specific, often technological objectives) and learning (Winch and Gingell 2008; Universities. Encyclopaedia Britannica 1911). Formal education has a pivotal role in modern societies because civil society is dependent on educating citizens to be responsible, thoughtful, peaceful, and enterprising. It is the gateway to social mobility and a meritocracy, and a prerequisite for an internationally competitive knowledge-based economy. Thus, education has societal, personal, and wealth-creating roles, and is the vehicle for human progress and civilisation. Unfortunately, education attracts those wishing to conduct political, ideological, ethnic, and religious manipulation e.g. preventing teaching or discussion of topics deemed to contradict certain belief systems (e.g. evolution, origins of the universe), or giving undue emphasis on grossly out-dated topics. These types of education are usually associated with rote learning, a process sometimes deemed to be akin to brainwashing, and a process

opposed to critical thinking and an educational environment that stimulates originality. Education therefore deserves both close scrutiny and protection. In many countries, education at all levels (nursery/kindergarten, primary, secondary, higher or tertiary i.e. college and university, and specialist institutions) account for an increasing proportion of public as well as private expenditure. Employers universally require evidence of educational and sometimes practical attainment in the form of certificated qualifications. Few of these qualifications actually address common sense and long-term abilities. Prior to university entry, an assumption that students have already acquired a solid foundation in mathematics, physics, chemistry, biology, and languages can prove false, and thus many universities now offer remedial coursework to compensate for deficient earlier education. Islamic education still has a disproportionate allocation of teaching time in some Arab schools. The merits of a broad-based curriculum that is multidisciplinary and includes ethics, as found in certain liberal arts courses, are increasingly recognised in academic education, contrasting with the tendency of many traditional disciplines and curricula to become introverted and resistant to change.

## 2.2 *Science*

In many western countries, academic research in the humanities/arts and pure sciences has steadily gained ascendancy in status and esteem over engineering, applied science, and technology. This development is aided by the bureaucratic application of “performance measurements” based on citation metrics (see Sect. 4.7) and publicly accessible journal impact factors that are themselves dominated by U.S. publications and citation organisations, much to the detriment of national journals. Distortions can also occur by the formation of citation cartels (“I will cite your paper if you cite mine, and we will selectively ignore rival related papers”), artificial (auto) citations, and peer-review or referee cartels. A similar situation can prevail in the awarding of research grants. If taken to excess, short-term judgements based solely on simple performance indicators (e.g. annually rather than in three- to five-year blocks) of already established staff might lead to plagiarism, dubious even contrived research, and unfairness (see Sect. 4.7 and 4.8). Teaching per se of all subjects increasingly has been devalued relative to research as universities seek to attract high-profile researchers, their research funding, and kudos. Yet teaching, done well, is one of the careers that will shape the future of a society and must not be underestimated or devalued; poor teachers, however, are a menace and should be replaced at the first opportunity. Following the global economic downturn that started in 2007 and 2008, and huge competitive pressures posed by China and India, the importance of intellectual property, societally important inventions and discoveries, attraction of private-sector investments, and entrepreneurship, are now leading to changes in academic structures especially in those universities heavily dependent on the taxpayer and governmental largesse. Nonetheless, too few politicians and decision makers (in both the public and private sectors) have more than a

rudimentary understanding, let alone appreciation of the worth and potential of science, engineering, and technology. Throughout the world, government attempts to pick “winners” for subsidy-support have largely been economic failures. Academically, the melding of high-quality components of the arts and humanities with science is beginning to reveal new perspectives and interpretations (including visualisations) of history, archaeology, social structures, migrations, linguistics, and behaviour patterns. Some of these perspectives have major impacts in the marketplace, as in the development of the social media.

## 2.3 *Research*

Intrinsic to universities, research is the quest for knowledge and understanding - a fundamental feature of the human condition - in order to establish new facts, concepts, or theories, or to address existing problems, or uncover new problems, or prove ideas. There are many classifications of the various types of research and the methodologies employed (e.g. exploratory; constructive; empirical; primary or secondary; qualitative or quantitative; basic (fundamental) research that might be pure or strategic; applied; developmental; survey-based; bibliometrics; historical; descriptive; etc.). Some of the classifications are used to apportion funding or describe how funding has been allocated, for example the Organisation for Economic Co-operation and Development (OECD) published the widely adopted Frascati Manual that was revised in 2007 (Frascati Manual 2007) based on three forms of research: basic, applied and experimental development. Often, this bureaucratic segmentation is detached from the realities of research that ebbs and flows between these somewhat arbitrary classifications. University research has traditionally concentrated on curiosity-led research, the progenitor of nearly all major discoveries and inventions, regardless of how those paying for the research would like to describe it. Scientific research seeks explanations for the nature and properties of the world and universe, and is typically based on the **scientific method** (Popper 2003; Godfrey-Smith 2003). This involves assembling background information on the chosen topic; stating the hypothesis of prediction to be tested; describing the methodologies and defining the concepts and operational details; gathering the data (quantitative or rarely qualitative variables); analysing the data and calculating the levels of confidence; interpreting the data in relation to the tested hypothesis or hypotheses; and finally reaching one or more conclusions. The outcome is then subjected to independent peer evaluation and independent repetition. Relevant to this article, Ibn al-Haytham (965 C.E. – 1039 C.E.) who was born in Basra and lived in Cairo was a prominent contributor to the development of the scientific method (Selin 2008). In contrast to the sciences, research in the humanities typically employs **semiotics** (study of signs and symbols and their interpretation and deployment, extending to metaphor, analogy, and various other methods of communication), **hermeneutics** (the theory and methodology of interpretation, especially of religious and philosophical texts, extending to verbal communication), and

**relativist epistemology** (all knowledge, truth, and justification are relative to time, place, type of society, cultural and historical context, conventions and frameworks of assessment, morals, personal training, and conviction (Relativism 2015). Research in the arts can offer an alternative to scientific methods and can be considered much more subjective and qualitative rather than quantitative, and often involves creative works as both the research and the object of the research programme itself. Research of all kinds relies on keeping careful records; where intellectual property claims are relevant, these records should be independently countersigned and dated.

## 2.4 *The University Concept*

Universities are institutions of higher education and research, repositories and custodians of scholarship and its advancement, able to grant academic degrees and provide both undergraduate and postgraduate education (Universities. Encyclopaedia Britannica 1911). Ownership models vary throughout the world, some are owned directly by local or national governments, many have charitable status, some are companies limited by guarantees from the state, others are private and may be non-profit-making bodies or just be commercial profit-generating businesses. The level of control by governments over universities also varies, ranging from the oppressive to laissez-faire.

The diverse academic disciplines studied include the natural sciences (biology, chemistry, earth sciences, space science, physics); formal sciences (computer science, mathematics, statistics); applied sciences (agriculture and horticulture, engineering, medicine and health sciences); social sciences (anthropology, economics, law, politics, psychology, sociology); humanities (geography, history, languages, literature, philosophy, theology); and performing and visual arts. Each discipline has numerous branches or sub-disciplines. Some subjects such as education, design, and thematic topics involve work across several disciplines. Indeed, in order to encourage “hybrid vigour” of innovative thinking there is now much greater emphasis on multidisciplinary, interdisciplinarity, and transdisciplinarity that integrate components from various traditional disciplines and sub-disciplines. Universities may also provide training in a select group of professions, and may be involved in continuing professional development. Some universities have publishing houses and journals, and hold high-profile conferences, and may release online courses on the internet (see Sect. 3.15). As regards nomenclature or title of the institution, some universities are essentially polytechnics or institutes of technology in that they concentrate on applied science, technical matters, and industry but not necessarily exclusively. The Arab world would derive enormous benefits if it could create the equivalents of the renowned California Institute of Technology (Caltech), Massachusetts Institute of Technology, and the Swiss Federal Institute of Technology in Zurich (ETH).

The term *university* is derived from *universitas magistrorum et scholarium* revealing its origin in European medieval times as an institution of masters (*magistrorum*) and scholars (*scholarium*). They were like many other medieval guilds organised for protection against hostile outsiders and competitors. They were able to study issues objectively during eras of both ecclesiastical and secular authoritarian control. Its equivalents thrived in the Arab world. In medieval Europe, university curricula included logic, rhetoric, grammar, music, arithmetic, geometry, and astronomy; all subjects propaedeutic to the study of theology, law, and medicine. At that time, the concept of academic freedom was born, guaranteeing unhindered passage to travelling scholars. Nowadays, this concept in its widest form refers to the freedom to research, teach, or communicate facts, ideas, or concepts that might be regarded as inconvenient, subversive, or contrary to the beliefs or ideologies of the authorities, or other external individuals or groups. In reality, various constraints are placed on academic freedom in most countries. Academic tenure should be designed to protect this precious form of freedom without it being used to protect the incompetent, corrupt, or lazy.

All older universities sustain remnants of religious influence in the titles of some of their staff, nature of certain official functions, and characteristics of formal academic dress; the prominence of religious coursework in many universities also reflects the historical influence of religion. Modern research universities are a successful American creation derived from a coalescence of the college system operated by Oxford and Cambridge universities in the UK, and the development of research institutes in Germany in the early 19th century (Altbach and Salmi 2012). Fundamental to the concept of a university is its intellectual distinctiveness from the society that surrounds it, and contrary to much contemporary thought, it does not have to be “riding” one or more of the “four horses of the apocalypse”, namely relevance, engaged, specialised, or practical. Yet, if societies encourage mass university participation involving taxpayer support, then the intellectual distinctiveness must stimulate innovative thought, subject competencies, and qualities (such as specific skills) that contribute positively to societal development. In other words, relevance, engagement with society at large, and curricula of specialised taught courses with some form of practical application are inevitable, bearing in mind that university education should have merit beyond immediate economic appraisal, offering critical thinking and problem-solving attributes developed in institutions noted for the creation, interpretation, and dissemination of knowledge. Measuring the effectiveness of an institution’s relevance, societal engagement, specialisms, and practicality can only be achieved by monitoring the careers of graduates and postgraduates. All universities need to invest more in this monitoring work to assess their worth as a centre of learning; at present, most of these tracking exercises are to coax donations from wealthy alumni. When there is a huge dependence on the taxpayer or when governments are oppressive, then conditions of state funding and control are applied, but it is in the long-term interest of society that these conditions should not be onerous. The European model of relatively uniform higher education in which the state has a dominant role is giving way to the American model of mixed state and private establishments of variable quality. Many universities subscribe to the

fundamental principles of the **Magna Charta Universitatum** formulated in September 1988 (The Magna Charta Universitatum 2017). Unfortunately, there are many organisations around the world that should not be dignified with the title of university but have nonetheless acquired the trappings, such as staff titles and financial rewards, of proper universities.

## 2.5 *Social Inclusion*

Some countries have adopted active policies to encourage social inclusion and equality of opportunity (equity), and thereby promote social mobility by increasing the proportion of school leavers entering university. The USA pioneered mass higher education in the early 19th century. The global university enrolment ratio (the proportion of the respective age cohort enrolled in universities) increased from 18.36% to 34.45% in the period 1999–2014 (Education 2017). A combination of demography, demands of employers and working practice, urbanisation, and especially relevant to the Arab world, high levels of unemployment and political instability, has driven this trend. In fact, in several Arab countries there is particularly high tertiary-education enrolment but it is associated with low economic growth, meaning that there is high graduate unemployment and inevitably many questions about the quality of education provided. Thus, the financial return on investments in Arab higher education is muted. Elsewhere and no doubt also reflecting the aspirations of young Arabs, the so-called graduate premium (income difference between those with and without degrees) is sufficient to sustain the demand for university education. Employers now demand credentials as the proof of ability to deploy diverse technologies, and contribute to an enhancement in productivity. The post-graduate premium appears to be steadily increasing globally, fuelling the expansion of research-based universities. Sadly, the improved enrolment ratio tends to coincide with a fall in entry standards and even graduate award standards, and also a decline in student behaviour and discipline. Some think that this decline is also mirrored to some extent in the declining quality of the academic staff. Declining entry and graduate award standards are often associated with an anti-elitist (“anti-discrimination”) thrust detrimental to the maintenance of high-level bodies of scholarship that are necessarily intrinsically both discriminatory and elitist. Mass indiscriminate entry can deny adequate funding and facilities for the brightest and the best. This anti-elitist approach may reflect a failure by governments (and their civil service and their policy advisors) and parents to address poor standards of primary and secondary education as manifest by shortages of competent science teachers and the growing popularity of faith-based schools usually noted for their imposition of certain beliefs, intolerance, and adherence to rote learning. A counter argument is that the university system currently operated is overly obsessed with hierarchies of various kinds and the concept of ranking. This arrangement can act as a barrier to meritocratic advancement, further amplifies social segregation and stratification, thereby creating a kind of class system. Despite this caveat, most countries

subscribe to the development of a select group of elite research-based universities deemed to have crucial strategic value. That does not detract from governments introducing new strategies for lifelong learning delivered by universities, colleges, and institutions of further education and training.

On entering university, inadequately educated school leavers are poorly equipped for reaping the benefits of university education or even the advantages available in the modern world. Primary and secondary school curricula together with national public examinations and the quality of teaching should be subject to continual revision and upgrading. Four common features of highly unionised public-sector education are declining standards, protection of outmoded working practices, reluctance to accept individual performance measurements, and resistance to published institutional comparisons. Quality is paramount; the return on low-quality education at all levels is poor, hence a need for governments, other sponsors and investors, potential students, and staff to scrutinise university rankings. Teaching assessments are giving way to assessments of student-centred learning and development of core competences; such assessments demonstrate the effectiveness of the teaching process, hence the teacher.

## ***2.6 Population Hinterland***

Some academic planners internationally have opined that only one university is warranted for every million people in order to ensure adequate resources would be available for the spectrum of taught subjects essential for an establishment to justify the term “university”. Many so-called universities are no more than liberal arts colleges, religious establishments devoted to the furtherance of a single religion, or technical colleges, and some draw on restricted religious, ethnic, or racial groups. Internationally focused universities, however, draw on vast multi-ethnic, multi-religious, multi-lingual, multi-cultural population hinterland, and are supported by numerous sponsors and alumni. Sometimes, universities reflect a nation’s ethnic and religious differences, and comprise a mix of private and public universities, often with their own network of feeder schools.

## ***2.7 Purpose***

Views on the core purpose of a university range from a form of intellectual purity, as advanced by S. Collini (2012) whereby students gain a perspective “on the place of their knowledge in a wider map of human understanding” (in other words universities provide “a home for attempts to extend and deepen human understanding in ways which are simultaneously disciplined and illimitable”) to a more commonly adopted utilitarian role in contributing in a positive way to the local, national, or global economy. They aim to be self-perpetuating; independent; oases of peaceful

thought, debate and innovation, contributing to wider society and the progress of humanity in diverse ways. Besides the creation, interpretation, and dissemination of knowledge and its custodianship, universities are increasingly involved in the exploitation of knowledge. Questions then arise as to issues of accountability to whom and for what purpose, not least in respect of national and local governments, sponsors, benefactors, investors in the case of for-profit private universities, civil-society groups, staff, and students.

## ***2.8 Universities as Engines of Economic Growth***

In recent times, universities and associated institutions have been described as “Engines of Economic Growth” (Feller 1990; Bresnahan and Trajtenberg 1995), thereby justifying public-sector investments in them but invariably imposing huge responsibilities and liabilities on the recipient organisations. If economic growth falters, they and their management teams are in danger of being considered failures, whereas in reality the linkage between universities and national economic growth is essentially multifaceted, with uncertainty over the nature and quantification of the linkage. Often, there are in any case long timelines between conception and the economic and social impact of any inventions and discoveries or implementation of societally important processes.

## ***2.9 Economic Roles***

Universities collectively are big business. They employ lots of people, handle a great deal of money, and represent a major influential interface between the host country and the rest of the world. They can transform their immediate hinterland in both the private and public sectors, and underpin regional growth and raise the standards of public life irrespective of weak or corrupt local political and private-sector leadership. The output of graduates is crucial for all economies, particularly in recessionary times when graduate jobs are more resilient and better paid than non-graduate jobs. Virtually all universities need to attract fee-paying foreign students not only to ensure solvency but also to enhance academic life, provide exemplars of hard work and parental sacrifice, and establish and reinforce long-term links between the university’s host country and the rest of the world. Staff exchanges, pursuit of international funding, the drawing of international comparators and best practice, and joining international research consortia also reinforce this international perspective. The effectiveness of research in universities is similar to that in the private sector in that it depends on the quality of leadership and types of incentive.

## **2.10 Staff**

Academic staff should be outstanding intellectually and demonstrate a commitment to furthering scholarship through teaching and research, the balance between these activities reflecting the needs and ethos of the institution. Most, if not all, staff members are expected to interact with wider society – nationally, but importantly, internationally. An extrovert approach should not and must not compromise independence of thought and action, but will inform the quality of teaching and research direction. Universities should be able to cope with extroverts, introverts, and eccentrics, as well as with people of diverse views; after all, they should represent a propinquity of intellectuals (see Sect. 3.8). Universities can also enhance the quality of primary and secondary education specifically, and education generally, by hosting teacher-refresher courses and investigating new form of education now available through advances in information and communication technology (ICT). It is a matter of regret that some universities have a tendency to appoint their own students to staff posts rather than hold open competitions with international evaluation methods. Universities collectively are also notoriously slow to reform. Fundamentally, staff can be assessed on the extent to which they regard their post as a “job” with connotations of minimal input just to satisfy the management, or as a true vocation demanding full commitment to their sphere of study, and operate with proper collegiality. The removal of age discrimination and fixed retirement ages is leading to a rapidly aging workforce and concomitant reduced opportunity for appointing fresh young staff; measures are needed to remove those members of staff unable to contribute positively to delivering high-quality teaching and research.

## **2.11 Degree Devaluation**

As the numbers of universities and the number of graduates have increased rapidly over the past two decades, as have the numbers gaining the highest degree classification, the value of a “degree” has been diluted although not all disciplines are equal in rigour or laxity (Roser and Nagdy 2017; World Population Program 2017). Many employers complain about graduates not being “employment-ready” because they lack several essential skills and abilities. Similar complaints are commonplace in both the public and private sectors about postgraduate awards. Even with widespread use of external (independent) examiners, the standard and perception of the quality of degrees from different universities varies, and varies over time, affecting the employment of graduates, fee income, and the appointment of first-rate staff. Furthermore, all formal examinations and routine assessments should be designed to prevent a decline in rigour and the incidence of cheating (e.g. purchase of essays and theses); axiomatically, examinations and assessments should be subject to quality assurance.

## ***2.12 Choice of Course and Curriculum***

Student choice and research income in large measure determine the shape and course content of universities. Areas of scholarship can be lost if students avoid “difficult” courses, especially those involving advanced mathematics, physics, and chemistry, the life sciences, and other subjects demanding understanding and utilisation of complex concepts and vocabulary. Cost of the course, its duration, its relationship to other courses, employment prospects, school educational experience, as well as the quality of the academic lecturer and associated facilities are the key components along with the institution’s reputation (justified or merely historical) influencing choice nowadays. At this juncture, most Arab universities fail to provide adequate information on their websites. Independent value-for-money analyses are being developed to aid prospective undergraduate and postgraduate students as well as research funding bodies and other sponsors (Conlon and Patrignani 2011; Excellence v Equity 2015), thereby imperilling mediocre institutions. Nations need to encourage a flow from quality-assured universities of suitably educated and trained graduates in key core subjects.

## ***2.13 Science, Engineering, and Technology***

Throughout the global higher-education system, there is a constant struggle at both undergraduate and postgraduate levels to fund science, engineering, and technology (SET), especially in concert with design courses and other creative industries, subjects that need substantial amounts of capital equipment, specialist laboratories, consumables, technical support, and continual updating. These resources have a direct relationship to generating patents and other forms of economically valuable intellectual property, attracting private- and public-sector support and investments, and creating spinout companies (Griffith 2000; Ulku 2004) (see Sect. 3.19). Technologically advanced inward investments throughout the world are usually related to the quality of a country’s research and development (R&D) infrastructure. Experience shows throughout the world that civil-service-controlled R&D entities are typically inefficient, relatively unproductive, expensive, and divert resources best deployed in properly managed universities and their ancillary organisations and companies.

## ***2.14 Governmental Roles***

Governmental support for universities takes many forms. In many western countries, there can be an almost total dependence of universities on the taxpayer, invariably bringing in its wake bureaucratic autonomy-destroying burdens that include

political and civil-service interference in senior staff appointments, staff employment and working conditions, student admissions, enforced performance indicators, subject choices, research portfolios, administrative structures, the distribution of spend, governance structures, and even enforced mergers or closures. Accountability is inextricably linked to autonomy. Arm's-length funding arrangements through independent regulators, funding councils, and learned societies for teaching and research offer only limited protection from day-to-day as well as long-term interference, and are relatively ineffective in times of economic stringency although arm's-length funding bodies may deflect ire away from politicians. Indeed, in a globally competitive marketplace, many observers question the sustainability of the European social model with its characteristics of high welfare benefits including educational support, high levels of taxation, state involvement in family life as well as much of the private sector, and high levels of bureaucracy. The inherent risk-avoidance tendency is to operate on the concept of equality, diluting resources across a wide range of institutions and not focus on areas of strength and national need, especially if there are anti-elitist attitudes in government and its quasi-autonomous administrative bodies. Rarely are the true costs of running bureaucratic bodies and their impacts properly assessed. By tying virtually all research funding to relatively narrow (usually conventional) projects, the research councils and other government-sponsored research funders are leading to the loss of the crucial freedom-to-operate principle underpinning curiosity-led research that is so productive for discovery, invention, and novel thinking. In countries that do not provide substantial public-sector support for university teaching and research, and where universities are dependent essentially on fee-paying students, then most areas of SET tend to suffer in addition to the international ranking of the institution, adversely affecting its participation in major international consortia, and the ability to attract leading researchers and thinkers. Independent oversight of private universities is needed to ensure the profit motive does not override the quality of education and to eliminate the issuance of worthless degrees.

## ***2.15 Governments and Standards***

Governments have a basic duty to guarantee that any institution operating on its soil deserving of the title "university" operates to international norms in respect of standards in awarding degrees and freedom of speech. The benefits accruing to society from the universities it hosts are prodigious only if these standards are sustained. Universities need to warrant that the courses they offer are neither ill-taught nor low grade. Any licence to operate and/or taxpayer contribution will surely come with strings to ensure some of the courses at least have societal relevance, perhaps with associated professional training and recognition by the professions. Fee-paying students require confirmation of the quality and value for money of the offered courses – they are, in effect, customers with purchasing rights. Producing large numbers of unemployable graduates, besides wasting a crucial phase in the life of

these young people, is a waste of time and resources as well as a generator of political instability. Nevertheless, any government that fails to utilise its talented young graduates, and fails to foster mechanisms to capitalise on pioneering work in its universities and research institutes, fails its people and invariably ends up exporting its intellectual assets (“brain drain”). High graduate unemployment can be regarded as much an indictment of poor university education as well as an indicator of poor national economic governance. In addition, unemployed and under-employed graduates put extra social pressures on an underclass of less-educated non-graduates, and can be another source of political unrest. Governments can assist in counteracting grade inflation (see Sect. 2.11) by supporting external, independent verification of student ability and the quality of taught courses, even though there will undoubtedly be resistance from some of the institutions themselves. Two such verification systems are worthy of consideration. In the USA, the Critical Learning Assessment (CLA) initiative tests critical thinking, complex reasoning and writing in order to assess the extent of any gains between entering university and graduating (Arum and Roksa 2010). The OECD has embarked on a feasibility study for the Assessment of Higher Education Learning Outcomes (AHELO), aiming to see if it is practically and scientifically valid to assess what students in higher education know and can do on graduation (Testing Student and University Performance Globally 2016). More than a ranking, the AHELO assessment aspires to be a direct evaluation of student performance at the global level and applicable across diverse cultures, languages, and different types of institution. Education ministries have a particular responsibility to safeguard the standards of national pre-university education and examinations.

Other verification systems can come from monitoring university ranking tables (see Sect. 2.16), citation metrics (see Sect. 4.7), and quality-assurance accreditation (see Sect. 4.15) supplemented by studies of societal relevance.

## **2.16 University Rankings**

Competition for student tuition fees, research funding, political influence, public perception, and entrepreneurial staff is leading to a pronounced stratification of universities, a process largely driven by various forms of publicly available rankings that assess performance indicators that are usually resource-intensive, wealth-related, and focused mainly on research. There are no reliable internationally comparable metrics of teaching quality. Rankings give rise to processes monitoring of quality standards, driving change in university practices, and raising questions about value-for-money for tuition fees and the education offered. Numerous organisations, many of which are government funded, release ranking data on universities globally and in the regions and nations. Some of these rankings, thought to exceed 150 globally, are undoubtedly politically influenced, and the rankings in turn have stimulated governments to invest in their leading institutions (sometimes at the expense of their weaker institutions) in order to raise their international standing.

The three most influential ranking organisations are reckoned at present to be the Times Higher Education World University Rankings (Times Higher Education World University Rankings 2017), the QS (Quacquarelli Symonds) World University Rankings (Quacquarelli Symonds Ltd 2017), and the Academic Ranking of World Universities by the Shanghai Jiao Tong University (Shanghai Jiao Tong University 2017), now maintained by the Shanghai Rankings Consultancy. All three are in the private sector and base their analyses on several performance indicators. Other ranking organisations include the Dutch Leiden Rankings, the French Professional Ranking of World Universities by the Ecole Nationale Supérieure des Mines de Paris, the Spanish SCImago Institutions Ranking, the European Union's U-Multirank, Turkey's University Ranking By Academic Performance, Webometrics Ranking of World Universities, and the Russian Global University Ranking using the RatER rating agency. Universitas 21 (U21) issues rankings of national higher education systems rather than individual universities. There are additional ranking organisations focusing on the perception of standing by a portion of the academic community, or rankings that concentrate on specifically on law schools, business schools, medical schools, science departments, etc. Various newspapers and publishing media may analyse a part of university activity, such as the standing of published scientific papers, graduate performance, and Google search engine data on website popularity, and various international magazines also publish university ranking data, sometimes using data from the prominent ranking organisations, with or without attribution. Subject rankings of the sort published by QS World University Ranking by Subject may become more important for students considering specific courses rather than whole-university ranking. Criteria used to judge universities encompass teaching and research quality and impact, entry standards, degree-completion rates, student-staff ratio, quality and breadth of the services and facilities available to students, proportion of former students in graduate-level employment or postgraduate study, and feedback from students.

Those universities with especially strong research groups dominate the global rankings, especially universities in the USA, and are regarded as “global super-brands” in marketing terms. On the Shanghai Ranking Consultancy list of the world's best universities (2016), 15 of the top 20 are American, and 31 of the top 50. They employ 70% of living Nobel Prize winners in science and economics and produce a disproportionate share of the world's most-cited articles in academic journals. They search the world for the best talent. Most are privately operated with substantial endowments. They are characterised by having one or more sophisticated campuses and “knowledge hubs” comprising associated science parks and associated companies. Even so, there are concerns across the political spectrum about rapid cost inflation, drop-out and deferment rates, an over-emphasis on research at the expense of teaching, declining quality of graduates, diminishing returns on spend in science and technology, rising student and institutional debt, and expensive “politically correct” administrative bloat with expanding numbers of administrators, and many senior staff enjoying corporate lifestyles combined with job security. The advent of online learning, however, will undoubtedly reduce the need for physical proximity of staff and students, raise productivity because the

teaching of additional students is almost free, and imperil the existence of poorly performing institutions. Unfortunately, in many western universities, the rise of so-called “political correctness” is beginning to threaten free speech and staff employment.

No Arab university appears in the top 100 universities in the world, despite some spending prodigious sums of money on infrastructure and attracting some leading academic staff. Specific detailed information on the rankings of Arab universities are routinely published by QS, Times Higher Education, and Webometrics produced by the Cybermetrics Lab (Ranking Web of Universities 2017), a research group of the Consejo Superior De Investigaciones Científicas of Spain. There are no comparative global ranking data on the quality of governance, financial management, financial resilience, and independence from state control.

How seriously can we take rankings? Universities are more conscious of their impact on attracting students, staff, grants, contracts, and their reputations. Accordingly, the behaviour of universities is becoming modified as they try to adapt to a highly competitive internationalised higher-education market. Institutional performance in ranking tables is already affecting staff emoluments and appointments, and governments are using the data to apportion funding and regulate immigration. Yet caution is advised. Many of the rankings use somewhat subjective performance criteria that suffer from faulty and statically deficient methodology, and the criteria can change over time. Disproportionate weightings can be given to certain institutional data, such as the employment of Nobel laureates, and the ranking organisations restrict the number of universities they review. Most significantly, the rankings are dependent on the quality and integrity of the data released by universities, often with little independent scrutiny. Universities may be falling victim to the so-called Goodhart’s law, named after Charles Goodhart, a former chief economic advisor to the Bank of England, who stated that once a social policy or economic indicator is made a target for the purpose of social or economic policy, then it will lose the information content that would qualify it to play such a role. In other words, when a measure becomes a target, it ceases to be a good measure. Individuals and organisations try to anticipate the outcome of a policy or social pressure to target measures such as citation metrics (see Sect. 4.7) or university rankings etc., and take actions to alter the outcome.

### **3 Newer Perspectives**

#### **3.1 Management**

Universities generally are organised through a hierarchical system from a Board, Court, or Council, through variously named posts of Chancellor, President, or Vice-Chancellor with their deputy posts, through committees responsible for administration, schools, colleges, and faculties, and then to departments normally headed by the post of chair, and separate sections thereafter. Discipline-based departments are

giving way to multidisciplinary departments, and titles of departments are constantly amended to capture the attention of prospective students and funding bodies. This hierarchical arrangement varies considerably throughout the Region and is undergoing considerable revision as course designs change. Many or most senior posts are on a fixed-term basis. Regardless of responsibility for substantial investments and the futures of their students, poor managerial arrangements characterise many universities in the Arab world as they try to optimise the use of their human and physical resources whilst sustaining the concept of academic freedom. Without rigorous selection policies, rotating and elected chairs/heads of departments and short-term senior managerial positions can lead to the appointment of inexperienced and weak leaders lacking resource-management skills and vision, but who may be “popular” and incapable of challenging underperformers or difficult colleagues. Universities are bedevilled by lowest-common-denominator management systems, and sometimes suffer from a vindictive, corrupt, and incompetent senior management. Dominant characters or politically or ethnically well-connected academic staff can avoid important teaching and administrative duties, even when these duties sometimes only amount to a minor part of the working week, while pursuing their own selfish research and consultancy careers, or pursuing colleagues they dislike, or protecting underperforming staff they favour. Excessive use of sabbatical leave can compromise teaching and research supervision. Indolent members of staff on increasingly rare permanent contracts still parasitise some of the older universities. At the very least, the processes involved in renewal of fixed-term contracts enforce a work ethic. Nevertheless, lack of continuity of employment for otherwise established academics can undermine self-confidence and affect supervised students as well as lead to the neglect or misuse of important collections, literature, areas of scholarship, intellectual property, facilities, and the inappropriate deployment of support staff. In personnel-management terms, universities in an attempt to demonstrate “equality” have been described in terms of “trying to manage black kittens on a mountainous hillside in the pitch dark”, or “parking lots for the intelligent or supposedly intelligent unemployable”, or “a series of individual faculty entrepreneurs held together by a common grievance over parking and the remuneration of others”.

Research supervision as distinct from teaching requires special personal characteristics to stimulate originality and instil a lifelong ambition to advance scholarship in the supervised. Some supervisors of large teams have tended to use research students merely as technical support staff and the theses produced are exploited in a sequence of publications by the supervisor. In these circumstances, although the student derives mutual benefit from student colleagues working on almost identical projects, the student is constrained in the research conducted. Publications are often parasitised by supervisors demanding joint authorship of all papers resulting from the work of the research student rather than encouraging the production of even one single-author paper with a mention of the supervisor merely in the acknowledgements section. Research supervision should not rely on a single member of staff, no matter how senior, but come under the scrutiny of a panel, and should cover training in ICT and statistics, delivering presentations and participating in debates, prepara-

tion of manuscripts, competence in relevant experimental technologies, appreciation of ethical issues, and participating in conferences.

Perhaps one of the most difficult human resource challenges in academia is the serious problem of declining output from aging tenured staff that have devoted their lives to a relatively narrow area of scholarship but have become out-dated or just tired even though they may have been important contributors in earlier times. In the absence of fixed retirement ages, enforced redundancy or reduced emoluments are the only option for most universities. Yet some older staff can offer wisdom and balanced judgements to younger colleagues, and are often sources of crucial elements of knowledge including corporate history of the institution. In reaching judgements on staffing (choice of subject, expectations, recruitment, retention, termination of contract) it is clear that the qualities of the leadership team are paramount, qualities combining vision for the institution, competence, high aspiration, integrity, and dynamism.

The top management team has to liaise closely with, and have the confidence of, senior staff groups (*e.g.* faculties, senate) as well as with the Board or Court of the University that is ultimately responsible for the institution. Pivotal roles include the equivalent of the Chief Executive (President, Principal, Vice-Chancellor), the head of financial and asset management, and the company secretary with control over the regulations, statutes, and legal standing of the university as it interfaces with the host country and meets international obligations. Above all, universities must act to the highest standards of propriety and fairness. In our experience, this can be difficult in certain Arab countries and in some universities, as it is in other parts of the world. So often, disciplinary and employment issues are dealt with in prejudicial ways that lack the basic tenets of justice and may rely on the views of staff demonstrably incompetent in legal matters.

### ***3.2 University Courts, Boards, and Councils***

In company governance terms, the highest authority in a university is usually the Court, Board, or Council. Central to the operation of the Board are the underpinning and publicly available university charter, statutes, ordinances, and regulations, including details of legal structures, rights, powers, and responsibilities. Hitherto, inadequate attention has been given to the qualities needed to be a member of the Board, and how those qualities interdigitate with those of other Board members. Managerial experience, maintenance of standards, custodianship of assets and resources, scrutiny of the executive, altruism, and crucially full appreciation of the role of universities and vision for the development of the institution are paramount. Conflicts of interest must be declared in public, and the duration of appointment constrained; if a member has special expertise that should be retained then they can be co-opted on an ad-hoc basis. The appointment process must be transparent and have the confidence of the staff and student body. Clearly, the Chair of the Board carries enormous responsibilities and must have a small support team accessing

essential performance data, comparisons with other institutions, and reviewing statutes and regulations. The position of the Chair in most institutions is distinct from that of the President/Principal/Vice-Chancellor and the executive/senate. Boards have to be sure of the financial viability of the institution and safeguard against the accumulation of excessive debt arising from over-optimistic growth projections; similarly, custodianship of assets for the long-term benefit of the institution is another area of responsibility, and any disposals should be carefully scrutinised. Risk analyses and financial stress test should be routine. Student and staff representation is commonplace, but in many respects they are essentially observers and commentators rather than playing the main role of setting the direction of the institution. Alumni representation is to be recommended as a way to sustain standards, reputation, and generate financial support, especially for social activities and capital expenditure. Ancillary boards can be established to involve supporting bodies, review reports from external examiners and visiting groups. Of significant importance is having Board membership of influential people, some of whom “walk the corridors of power”, or have excellent commercial contacts, or are noted intellectuals. Expertise in the international arena is a prerequisite. Dealing with a failing executive will reveal the level of board competence, especially if the executive is facing hostile media reports and legal challenges from staff and students as a result of poor and biased managerial decisions.

### ***3.3 Competitive Positioning***

Universities must now contend with the concept of market choice and competition where students are able to choose their university armed with a prodigious amount of information on prospective institutions (see Sect. 2.16) and their employees. In countries lacking national comparative assessments, students can check international league tables, scrutinise websites, and consult a wide selection of advisory bodies and individuals. Students already in a university can compare the information they receive in lectures and seminars with material on the World Wide Web. Student World Fairs are becoming more prominent where universities offer their services on an international stage, emphasising the need for more enlightened marketing strategies and organisational transparency. Reputation management is now a serious issue, so as to avoid situations where dissatisfied students and staff members voice their views on the internet *via* social media (perhaps gleaned from student feedback surveys), or members of staff break confidentiality agreements, or carry out illegal or dubious activities, and bring the institution into disrepute. Fee-paying students – and disaffected staff for that matter – in the modern era are also more litigious and able to air their views in open court and gain publicity. Nonetheless, the biggest risk to all honest organisations is being too risk-averse in their course design, content, and institutional management, and they all-too-often fail to take advantage of new advances in knowledge. Nations and individual universities now strive to attract students of great intellectual ability and potential. A combination of