

THE RESEARCH STRATEGY AT KINGDOM UNIVERSITY (KU) AND ITS ROLE IN THE PROCESS OF INSPIRING RESEARCH OUTPUT

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ABSTRACT

After discussing the theoretical and policy changes that have driven developments, this article will discuss the role of research management and research function in the context of these developments. A case study will show research management at KU, which will explain how a university determines a research plan, sets priorities, and overcomes obstacles.

Keywords: Knowledge, Legal Possession, Human Capital, World Economic Forum.

INTRODUCTION

Knowledge is the most crucial source of intangible advantage for individuals and nations; in the same way, agriculture, industry, and economics are the essential sources of tangible advantage. Knowledge-based and intellectual assets, such as research and development, software, process innovation, human and organizational capital, are becoming increasingly crucial for successful economies. Besides, patents, trademarks, copyrights, trade secrets, registered designs, brands, computer software, contracts, and databases are all examples of legal possession. Human capital, process capital, and innovation capital are three types of intangible assets. Furthermore, according to the World Economic Forum, competitive advantage and performance are enhanced through knowledge-based and intellectual assets investment. Investing in research is essential in achieving the mission of higher education and creating an environment that is stimulating for both faculty and students—attracting and retaining excellent faculty and students, providing cutting-edge curricula, maintaining collaborative relationships with other academic institutions, professions, and industry, expanding the boundaries of knowledge and understanding across disciplines, and attracting generous support (Goh, 2005).

Research capacity and competencies have become more critical in determining universities' status and reputation and competitiveness. Due to these developments, university-based research has moved from an ad hoc to a tightly managed genuine academic enterprise. Developing a research strategy and establishing the required internal structures are now essential issues that universities are adopting.

Knowledge creation, as part of university rating indexes, is widely regarded as valuable assessment tool for measuring university performance. Being listed in these famous indexes acts as a powerful advertisement for a university, allowing it to attract top students and professors from all over the world.

Higher Education: An Economic and Social Change Driver

Higher education has three core goals: to develop new knowledge, new knowledge workers, and new knowledge producers. In other words, teaching and research in higher

education play a critical role in developing human capital. The discovery of new ideas and the translation of new ideas into new products and services will contribute to the economy. Universities throughout the classical period differentiated higher education and scholarly research as separate and distinct goals and duties from the commercial industry—faculty in universities were more concerned with the transmission and expansion of knowledge than its development through research. Fundamental scientific research, excluding the arts and social sciences directly tied to social and economic progress, was the initiative's focus, which created the framework for organized government-funded research at the national level. To create new goods, new industries, and more jobs, we must constantly improve our grasp of nature's rules and apply that knowledge to practical uses. Scientific progress through research can assure our nation's health, wealth, and security in the contemporary world.

In the decades that have followed, university-based research has evolved into a critical component of the research-innovation ecosystem, serving as a driver of economic development and a crucial component of the research-innovation ecosystem. Economic advancement in modern industrial nations, according to some, depends on collaboration and connectivity among a wide range of entities universities, private firms, government/public sector, as well as science, research, and development (Barnes et al., 2002; Boni & Walker, 2016).

As a result, the notion of a national innovation system, the term "triple helix", appeared to reflect the collaboration between three social actors—universities, businesses, and governments—to foster regional innovation development and to highlight the crucial interaction between higher education, the public sector/government, and the private sector or sectorial innovation (Barnes et al., 2002; Etzkowitz & Leydesdorff, 1998)

Research is now interdisciplinary and closely collaborates with society, including the wider community, civic society, industry, and local communities. As a result, the Higher education Council in Bahrain policy tries to address knowledge system fragmentation by linking the three components of the 'knowledge triangle' – education, research, and innovation – to embrace the whole innovation chain from education to economic effect. The research, innovation, and commercialization environment must benefit from the funds available from research (Fontana et al., 2006; Gibbons et al., 1994). These ideas have helped establish a new organizational paradigm for higher education and university research, which has not been without critics. For example, if university-based research is driving economic development, private-sector interests dominate its risks (Darwish, 2015).

The objectivity and independence of academic research are compromised, as is the integrity of scientific research. Based on competitive funding, both nationally and internationally, this could result in a reduction in a national research capacity, with *"repercussions for regional economic performance and the capacity for technological innovation."* Intellectual property licensing and the formation of high-performance start-up businesses (HPSU) have emphasized converting information into new goods and services, resulting in knowledge becoming a commercial commodity, sometimes with unrealistic expectations and promises of return on investment. However, these findings do not diminish the fact that university-based research is widely acknowledged to contribute substantially to the *"knowledge society/economy"* or the *"smart state."* Instead, they put even more "pressure on universities as significant participants (Neubauer, 2012).

Research Drive & Leadership

As a result of altering the regulatory environment, university-based administration and leadership of university-based research have become a vital issue for academic institutions.

Research capacity and competence development are no longer optional, and research is not a solo activity but rather a rigorous institution-wide issue to be addressed. The approach is project-based, funded by external organizations, and subject to constant evaluation and evaluation at the national, institutional, and individual levels. As mentioned above, the shifting environment influences all universities in Bahrain and institutions throughout the world. The University research approach is widespread to increase the importance of university-based research in the region. The perspectives on research management presented in this article are generally relevant; however, the extent and depth of these views will differ depending on the historical background of the individual university system (Aithal & Suresh Kumar, 2016).

Research Strategy and Priority Setting

The definition of a strategy is the first step in research management. It should develop signature research themes that are compatible with the institution's mission and the national and international context of higher learning. As part of its overall strategy, an organization's strengths, weaknesses, opportunities, and threats (SWOT) should authorize priorities and define objectives. It may have been a purely informal method in the past, but now it is recognized as a critical component of effective governance and management, with many governments mandating it as a condition of receiving financial assistance. Colleges realize that it is no longer feasible to be world-class in every field of knowledge due to rising research expenses and greater competition for funding. Prioritization is an essential method, according to the experts (Kidwell et al., 2000). Calculating trade-offs between national, institutional, and researcher-specific objectives are a necessary part of this process. Even though universities would want to balance all three factors, doing so is sometimes unachievable. As a result, institutions must encourage researchers to re-align their national and institutional goals to compete for competitive funding.

Prioritization is not without its difficulties. Professorial disagreements may arise due to a perceived or genuine preference for specific disciplines or research subjects, which often has implications for the distribution of resources. National research strategies may emphasize and direct specific strategic goals for more significant funding. Due to limited resources, universities can provide better facilities, promotion, and other advantages to academics actively involved in their studies. Disciplinary methods of research may also influence priority determination. Individual researchers, scientists are more accustomed to responding to external opportunities as part of a research team.

Bahrain Research Philosophy

The research contributes to the advancement of technology by generating new knowledge. Innovation increases productivity and economic development, which are all fueled by technological advancements. In a broader sense, research is critical to the success of knowledge-based economies. Without strong higher education institutions, no country can flourish in a knowledge-based economy, and research is vital to have strong universities. To attract quality faculty and to create good graduate programs, research is required. It is also necessary to do research to obtain and apply knowledge and technologies developed elsewhere in the world. Companies, universities, and institutes that conduct research tend to be on the cutting edge of their industries and are more aware of global breakthroughs. Researchers who create knowledge are inclined to participate in forums and networks where new knowledge and technologies are developed; thus, more research and development is required. Bahraini research

is also crucial in providing solutions to Bahrain's needs — local and regional issues for which quick solutions are sometimes unavailable. Local industrial or business difficulties and health, environmental, economic, or social concerns are among them. Sustainability is a core principle of Vision 2030, and it is an example of a topic that necessitates both local and worldwide research in the fields of environment, energy, and economy HEC Research Strategy, 2014-2024 (PWC, 2019).

RESEARCH METHODOLOGY

Researchers may use a qualitative case study approach to explore complicated phenomena in their surroundings. When used effectively, the methodology provides a helpful way for research to build theories, assess programs, and design treatments. This work aims to help researchers identify critical factors for planning and executing research strategies in a university context. Because this case focuses on how and why we do what we do, a case study model is the best tool to apply. To plan, develop, and execute case study research, we attempt to provide a broad framework from a methodological and analytical standpoint. After analyzing a literature study on research techniques at universities, we approved our framework to assess its scope. This study shows a broad framework for guiding, designing, and carrying out a case study of university research, complete with levels and processes for university decision-makers to follow.

Research Objective and Importance

This paper aims to showcase the researchers experience in designing and implementing university research strategies. The principles of design and the results achieved in applying these principles may help decision-makers in other universities to benefit from our approach. It is worthy to remark that the achievement is predominant, which means that this is a valid work model that can be adopted in a similar university.

Research Question

How universities build effective strategy for research? and what are the extrapolations that will lead for success?

Kingdom University Case

Kingdom University developed a new research strategy in 2017 that aimed at improving the research output of the university. The research strategy was based on the following three initiatives:

1. Establishment and implementation of a systematic and transparent process for allocation of research funds.
2. Systematic identification and tracking of potential research areas
3. Establish an ambitious yet realistic research output targets for KU and motivate efforts in research

The goal of the research strategy was to focus the research work on priorities that were chosen during the first year of the implementation of the strategy and reviewed annually. The research priorities of the university and colleges took into consideration the national research priorities published by the Higher Education Council as well as the elements of the Vision 2030

of Economic Development Board of Bahrain. The research strategy required publishing in high quality journals and to gradually increase the number of research publications in the areas of the university priorities. As a result, all the papers published by the Colleges of Business Management and Architecture Engineering and Design were in journals that are indexed by Scopus and ISI. In addition, faculty members were encouraged to publish in journals of higher quartile rankings within Scopus. For papers published in Arabic language, the aim was to encourage publishing in journals indexed by Arab Impact Factor. In order to encourage the faculty members to achieve these goals, a number of actions were taken, in line with the above initiatives, which included the following:

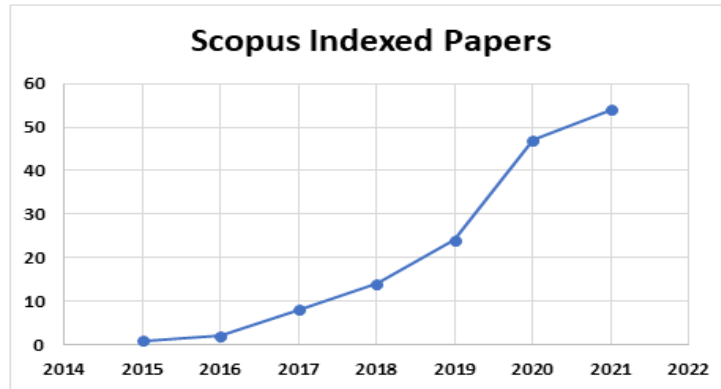
1. A research grant scheme was introduced. Faculty members can apply to receive a research grant. The online applications are collected by the Research Unit and sent to external reviewers. The Research Council makes a final recommendation for the approval of the research grants and the University Council gives the final approval.
2. Research incentives: publication fees are covered or reimbursed by the university.
3. Research award: a financial award is given for every paper published by the faculty member.
4. Best researcher award: Best researchers were selected every year and the winners announced. The categories of the awards were: The researcher with highest number of Q1 ranked journals in Scopus, the researcher with the highest number of papers on Scopus, the researcher with the highest number of points achieved based on the academic promotion points systems, and, finally, the researcher with the highest number of papers in journals indexed by Arab Impact Factor. The winners receive a certificate as well as a financial reward.
5. An annual research gathering is organized to discuss the progress of research strategy achievements and developments in the research priorities.

Prior to the implementation of the current strategy, most publications were in open access journals which are not indexed in well established databases such as Scopus. The research strategy was very helpful in focusing the efforts to achieve the goals of improving the research outcomes in both quality and quantity. Table 1 shows a list of the research priorities for the university and the colleges.

University	College of Law	College of Architecture Engineering and Design	College of Business Administration
Sustainability and Sustainable Buildings	Financial, banking, finance and insurance services.	Environment & Sustainability	Banking & Finance
Entrepreneurship	Mediation to resolve commercial and civil disputes	Environment Sustainability& health	Islamic Banking & Finance
Artificial Intelligence	Environmental legislation.	Environment Sustainability & Urban Planning	FinTech and AI
FinTech	Legal protection for women, children and people with special needs	Environment Sustainability& Art & Design	Covid-19 Impacts
Women Rights	The justice system, litigation procedures, and enforcement of judgments	Covid-19 Impacts	Financial Management & Banking
Covid 19	The impact of the Corona Pandemic on local and international laws		Innovation

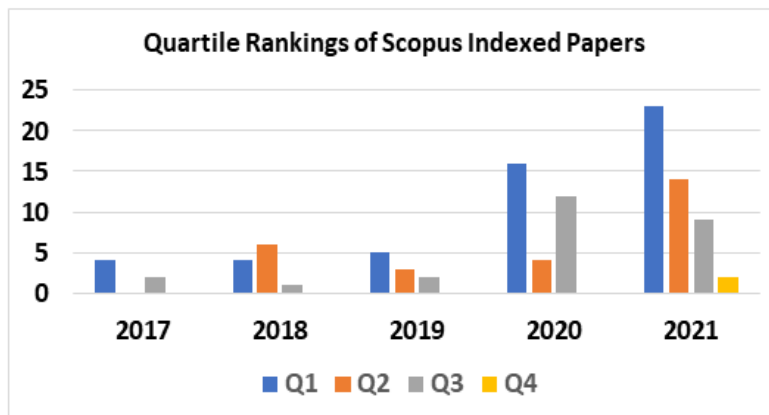
Research Profile advancement 2015-2021

The implementation of the above research strategy was effective in driving research in the university and resulted in achieving the set goals. For colleges of Business Administration and Architecture Engineering and Design, Figure 1 shows the significant rise in the annual Scopus indexed publications. Prior to 2017, most staff members published in journals not indexed by Scopus or other trust-worthy databases.



**FIGURE 1
GROWTH OF NUMBER OF PAPERS PUBLISHED IN JOURNALS INDEXED BY SCOPUS**

Through a series of awareness workshops and meetings, the faculty members were encouraged to publish in publishes in journals of higher impact factors or higher quartile rankings within Scopus or ISI. This was also one of the key performance indicators in the research strategy. Figure 2 shows that the implementation of the research strategy at Kingdom University was successful in encouraging the faculty members to select journals of higher quality for their publications. The gradual increase in the number of Q1 and Q2 quartiles over the period from 2017 to 2021. These quartiles represent the strength of the journals in terms of total number of citations measured by Scopus.



**FIGURE 2
GROWTH OF PUBLICATIONS IN JOURNALS OF HIGHER QUALITY, WHERE Q1 REPRESENTS JOURNALS IN THE TOP QUARTILE**

Any research strategy or strategic plan will need thorough follow up to ensure the implementation of the action plans. In Kingdom University, this was achieved through a continuous process of follow ups by the Research Council, Research Unit and the Deans of the Colleges. Figure 2 shows that the process started to achieve the set goals. Another important goal was to update the research priorities annually and encourage the faculty members to start research projects in these priority areas. Figure 3 shows the current research priorities of the university and the number of papers published in Scopus indexed journals for each priority.

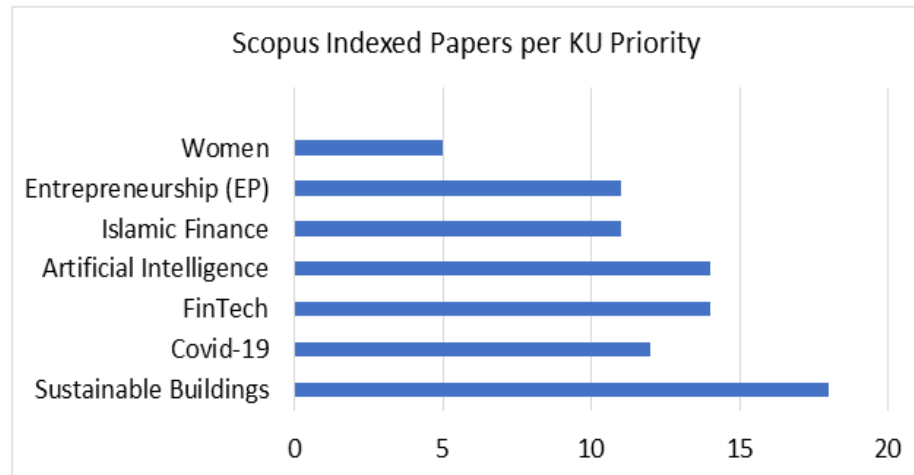


FIGURE 3
NUMBER OF PAPERS PUBLISHED FROM 2017 TO 2021 PER EACH UNIVERSITY RESEARCH PRIORITY IN JOURNALS INDEXED BY SCOPUS

Covid-19, Artificial Intelligence and FinTech are priorities added more recently, while Sustainable buildings, women, Islamic finance and entrepreneurship were the priorities selected in 2017. The priorities are announced and during the annual research gatherings, the faculty members are informed of any revisions in the list of priorities and are encouraged to conduct research in these areas. It can be seen that the faculty members reacted very positively to the assigned priorities and published actively in all the priority areas. Assigning research priorities was a very helpful practice that resulted in increasing the overall number of publications and also to focus on areas that are of importance and current.

CONCLUSION

This case study of the role of Research Strategy as part of the Strategic Plan of Kingdom University in driving research has shown that a sound strategy design and a robust strategy implementation can result in a successful research outcome. The role of leadership is essential in inspiring, supervising, planning and motivating all researchers. A continuous and thorough follow up, regular meetings and research gatherings, setting and regular revising of research priorities and encouraging all faculty members to implement the strategy have improved the quantity and quality of research output.

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Received: 02-Jan-2022, Manuscript No. ASMJ-21-10223; **Editor assigned:** 04-Jan-2022, PreQC No. ASMJ-21-10223 (PQ); **Reviewed:** 25-Jan-2022, QC No. ASMJ-21-10223; **Revised:** 02-Feb-2022, Manuscript No. ASMJ-21-10223 (R); **Published:** 28-Feb-2022