Promoting Research through an Inter-Institutional Collaboration Model in Bahrain

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Abstract

Health education programmes face numerous challenges, particularly in medical sciences. Universities are under pressure to provide innovative programmes and in particular curricula to embed and support research. Further, university rankings that have gained popularity in recent years pose another challenge to universities. As higher education continues to see limited government funding, the competition for global rankings within knowledge-based economies becomes more acute. The Kingdom of Bahrain has two medical schools, the College of Medicine and Medical Sciences, Arabian Gulf University (AGU), and the Royal College of Surgeons in Ireland, Bahrain (RCSI Bahrain). The two universities have established a sustainable collaboration that is a win-win situation for both institutions. AGU and RCSI Bahrain were driven by a common purpose to produce high quality research to serve the community and the region by the close working of faculty from each other's University. They envisioned that this collaboration would increase the research productivity of Bahrain and the region and would give researchers another source of funding. This further evolved into the signing of a memorandum of understanding in 2014 and the establishment of a Steering Committee. The AGU RCSI- Bahrain Research Grant has already supported nine research projects. Other beneficial outcomes emerged from this collaboration including organizing the AGU/ RCSI Bahrain First Joint Scientific Research Conference in 2019. We believe that AGU and RCSI Bahrain have achieved a successful and exemplary research collaboration.

Keywords: University; Collaboration; Research; Higher Education; Bahrain

Introduction

Health education programmes face numerous challenges particularly in medical sciences. These challenges include those variations in the policies of governments, rearrangement of health systems, and accessibility of assets (Coome, 2015). Thus, universities are under pressure to provide innovative programmes and in particular curricula to embed and support research. Further, university rankings that have gained popularity in recent years pose another
challenge to universities. As higher education continues to see limited government funding, the competition for
global rankings within knowledge-based economies becomes more acute.

There is increasing recognition by UNESCO and universities that transdisciplinary research acts as a driver for
sustainable innovations in society. New practices based on science-society-research partnerships, experiential
learning in higher education, and interactive and participatory modelling has to become manifest in educational
institutions (UNESCO, 2020).

There is a difference between cooperation and collaboration in higher education. Cooperation is short term and is
limited in its objectives while collaboration has long-term commitment and vision. The latter necessitates mutual
trust, respect and shared decisions (Stein and Short, 2001). Research collaboration between institutions has several
advantages. It results in utilizing expertise and building relationships between faculty members to exchange research
ideas and unite efforts to plan and undergo research projects. It also allows students to participate and enhance their
learning. Further, there will be savings in materials and equipment and other resources. Lastly, publications that have
more than one affiliation have a wider audience and greater impact.

There are various characteristics of collaborations within theoretical frameworks and concepts (Coombe, 2015). The
terminology describing inter-university collaborations includes partnerships, consortia, and cooperation (Kaganoff,
1998). The definition we envision is an agreement between two or more institutions to strengthen their academic
programmes and provide research opportunities and funds to their faculty and other academic pursuits.

There are four key principles that encourage the development of collaboration (Lepchenske, 1976; Patterson, 1970).
They include the expansion of educational opportunities, improvement of programmes' quality, saving money, and
community service. There are barriers to collaboration such as competing interests and anticipations, insufficient
allocated time, unreliable leadership, and others (Coombe, 2015). Alternatively, there are enablers to collaboration
that include mutual vision, objectives, commitment, and trust as well as, good communication (Coombe, 2015).

The most common arrangement is clustering within a geographical region as in our case as both universities are
based in Bahrain. The Kingdom of Bahrain is one of the six Gulf Cooperation Council countries. It is an
archipelago of 33 islands with 1.7 million population. The Arabian Gulf University (AGU) hosts one medical school,
the College of Medicine and Medical Sciences (CMMS) and the other is the Royal College of Surgeons in Ireland,
Bahrain (RCSI Bahrain). AGU has two colleges; CMMS and the College of Graduate Studies and one school, the
French Arabian Business School. In 1982, the first batch of medical students was admitted to CMMS. RCSI Bahrain
had its first batch of students in 2004 and it has in addition to the School of Medicine, two other schools, School of
Nursing and Midwifery and School of Postgraduate Studies and Research. The two universities have established a
sustainable collaboration that is a win-win situation for both institutions.

**AGU and RCSI Bahrain Collaboration**

The vision of the Presidents of the two universities was that the two medical schools should complement each other
rather than compete with each other and hence initiated this collaboration. In February 2010, a Liaison Committee
was formed with three members from AGU and three from RCSI Bahrain to explore areas of collaboration between
the two institutions in research, academic, and student activities.

AGU and RCSI Bahrain were driven by a common purpose to produce high quality research to serve the community
and the region by the close working of faculty from each other's University. They envisioned that this collaboration
would increase the research productivity of Bahrain and the region and would give researchers another source of
funding. This further evolved into the signing of a memorandum of understanding in 2014 and the establishment of
a Steering Committee that the authors were or are still members. An AGU/RCSI Bahrain Grant was established
whereby both institutions pay equal amounts annually to support joint research of faculty members. Each year, a call for applications is issued and applications are reviewed by a Review Committee selected by the Steering Committee and has membership of two senior faculty from each institution. The recommendations of the Review Committee are presented to the Steering Committee who has the final decision. The principal investigators of the winning projects seek ethical approval for the projects by the respective ethics committees of the two institutions prior to data collection.

Current State of Bahrain Research Investment

The gross domestic expenditure on research and development (GERD) as a percentage of gross domestic product (GDP) is a key measure of research investment. The GERD/GDP ratio for Arab countries is low ranging from 0.03% to 0.86%. The Scientific Publications Score for Arab countries in the Eastern Mediterranean Region (EMR) that have available data range from 69.3 to 273.7 and the R&D Expenditures % GDP from 0.1 to 1 (UNESCO, 2015; Schwab, K. 2019). Although funding on health research is generally not considered a priority, public investment in R&D has improved in recent years in some countries of the region (Ismail et al., 2013).

In 2014, the Higher Education Council in Bahrain launched Bahrain’s first National Strategy for Higher Education and Scientific Research. The Strategy intends to take Bahrain on the path towards its 2030 vision of becoming a diversified, sustainable, knowledge-based economy. It is based on the development of centres of excellence for the concentration of a critical mass of scientific local and regional networks. Therefore, there was a drive nationally to invest in research including healthcare to improve patient outcomes and develop a culture of research and innovation (Higher Education Council, 2014).

Bahrain had 115 publications per million inhabitants in 2014 with medical sciences constituting the majority (31.8%) during 2008-2014 (UNESCO, 2015). The University of Bahrain, the premier national university was included in the SIR Global ranking of research institutions in 2009. In 2020, AGU was also listed and ranked 744 out of 7026 ranked institutions. Research funding opportunities in Bahrain are scarce. AGU and RCSI have internal research grants and their faculty members are sponsored to present their research in regional and international conferences.

Establishment of the Joint AGU/RCSI Bahrain Research Grant

After advertising the special research fund in 2014, joint applications from both universities were encouraged through the convergence of expertise. It started by having one researcher from each institution submit a research proposal and apply for the grant. It was later modified to include two researchers from AGU and two from RCSI Bahrain to jointly submit a grant application. The advantage of two applicants from each University was that in case a researcher left then there would still be a colleague who could see the project through. It was expected that the projects would be completed maximum within two years, and in any presentation or publication, the grant from the AGU RCSI Bahrain Grant should be acknowledged. Another important aspect of the grant was that student participation from both institutions was encouraged.

Grants Awarded

The projects supported represent a wide interest of subjects from public health, basic sciences, oncology, endocrinology, and family medicine. To date, nine projects have supported by the grant. There were mainly under the following themes: cardiovascular diseases, diabetes, neurosciences, nanotechnology, genetics, and maternal health.
Results of Research Collaboration

A joint Senior Steering Committee oversaw this initiative since the signing of the agreement. The presidents of the two universities give full support and trust to the Steering Committee. The Committee updates the presidents at the end of each grant cycle. In addition to the 9 projects funded, there was a positive spin in the use of complementary facilities and techniques. For instance, sharing the Animal House at AGU, tissue culture laboratory, and other specialized equipment.

To date, there has been one co-authored publication with more publications in the pipeline. There were as well 15 oral and poster conference paper-presentations locally and internationally. The Steering Committee is looking into the possible ways to increase the research output and aspire to have all the publications Scopus indexed.

A huge boost to collaboration and advertising of the research fund was the organization of the AGU/ RCSI Bahrain First Joint Scientific Research Conference in 2019. Two state of the art lectures from world-renowned researchers, 16 oral presentations, 60 posters, and 4 workshops were hosted.

The Steering Committee also collaborated in other important mutual areas such as student placements, teaching and examination clashes, supporting faculty in shortage specialties, and examination of masters and doctoral theses. Further, the two institutions exchanged scheduled research activities and conferences and invite faculty and students to participate.

Conclusions

We believe that AGU and RCSI Bahrain have achieved a successful and exemplary research collaboration. It has been achieved by AGU and RCSI Bahrain through supportive leadership and by the cross fertilization of ideas, investment and productivity of research to mutual benefit, increasing the visibility of the two Universities and the quality of research produced in Bahrain. These initiatives are in line with the missions of the Universities and support the Higher Education Council's research strategy and aspirations of Bahrain and other GCC countries. An additional spin off is the professionalism affecting attitudes and behaviours. There has been good uptake by basic scientists and future development will include involving more hospital and community physicians.

Take Home Messages

- Inter-institutional research collaboration is defined as working together to produce new knowledge with wide applications in a cost effective manner.
- Even modest grant sums can have far-reaching effects in raising the morale and productivity of faculty, postgraduate and undergraduate students.
- Collaboration raises the visibility of both universities and the region through publications, presentations, and citations.
- Altruistic behaviour from senior faculty breaks down barriers, leading to positive role modeling of professionalism including attitudes and behaviours.
- This model is ideal for new and small universities with limited research funding, as the use of complementary facilities and expertise is cost effective.

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Appendices

None.

Declarations

The author has declared that there are no conflicts of interest.

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