Indian Journal of Information Sources and Services
ISSN: 2231-6094 (P) Vol.16, No.2, 2026, pp.79-88

DOI: https://doi.org/10.51983/ijiss-2026.16.2.09

A Strategic Framework for Building a Sustainable and Impactful Research Culture in Higher Educational Institutions

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(Received 21 February 2026; Revised 25 March 2026, Accepted 08 April 2026; Available online 05 June 2026)

Abstract - **Purpose: This study examines how University of Technology and Applied Sciences (UTAS)Ibra has developed its culture of research to contribute to Oman Vision 2040, specifically in faculty publication, integration of research and teaching, consultancy, and collaboration. The aim is to assess progress, establish areas of strength and weakness, and suggest strategies for sustainable research growth contributing to Sultanate of Oman knowledge-based economy agendas. Design/Approach: This followed a descriptive case study approach as picked from the institutional document on "Research & Consultancy Contributions by the Faculties of UTAS-Ibra for AY 2024–2025." The data analyzed were quantitative and qualitative: outputs of publications ranked by journal, frequency of citations, combination of teaching and research, consultancy service, and national/international collaboration. This paper attempts to analyze dimensions pertaining to research excellence, social good, and alignment with Vision 2040. Findings: The UTAS-Ibra output for AY 2024-2025 came to 84 publications with a global visibility indicator of 39% Q1. Renewable energy, digitalization, AI, and sustainable materials are the key national priorities that substantiate research directions. Research is embedded in Teaching Nexus, wherein teaching programs include research components that engage students as part of a systematic development research talent pipeline. Consultancy activity was exceptional in Business at 40%, Engineering at 30%, and Computing at 20%. Such national and international collaboration consolidated the interdisciplinary knowledge exchange. Challenges were the "minimal Q2–Q4 publications, low-quality industry-sponsored research plus variable departmental activity." Opportunities were cross-disciplinary study plus international collaboration added student and faculty involvement. Research Implications: The Sultanate of Oman developed Oman Vision 2040, a transformative national vision that is based on empowering the knowledge economy via innovation, research, and sustainable development. This paper discusses UTAS – Ibra's effort toward creating a research culture as part of Oman Vision 2040 implementation. The strategies on consultancy and collaboration in integrating teaching with research plus faculty members' contributions in publishing articles in Scopus-indexed journals with Quartile rating are elaborated herein. Publication statistics, consultancy activity, teaching-research interface, and collaborative research activity shall be used to describe this trend at the institution. Results confirm that systematic steps led by faculty development, interdisciplinarity, and consultancy responsiveness to industry requirements have been seminal toward developing a research culture. Recommendations for future development that can consolidate and take further the UTAS-Ibra research culture are forwarded.**

Keywords: **Oman Vision 2040, Quality Education, Sustainable Growth, Research Culture, Developing, Scopus Publications, Research-Teaching Nexus, Academic Consultancy, Institutional Strategy, UTAS Ibra**

I. INTRODUCTION

Oman Vision 2040 is the national restructuring plan of the Sultanate towards a knowledge-based and innovation-driven economy (Al-Saiari, 2023). Vision pillars prerequisite innovation, entrepreneurship, scientific research, and knowledge-based economies to sustain national development socially and meanwhile compete worldwide (Supreme Council for Planning, 2020). In this context, the perspectives of research and innovation are not academic endeavors but rather instrumental means that directly answer societal challenges plus human capital development and economic diversification beyond the oil industry.

Under this umbrella, Higher Education Institutions (HEIs) are primary change agents. (Avelar & Pajuelo-Moreno, 2024; Alshahrani & Ally, 2016; Shah & Gillen, 2024) They must align teaching, research, and consultancy toward addressing national priorities like renewable energy, artificial intelligence, sustainable development, and digital transformation. By embedding research in teaching and linking scholarly knowledge and industry needs purportedly HEIs can produce pragmatic solutions, policy advice, and technological innovation that feed directly into the channel of socio-economic progress of Oman (Alkaaf & Al-Issa, 2021; Vesudevan et al., 2025; Moheri, 2020)

From among these establishments, the most significant is UTAS – Ibra which assumes a frontward part, especially in Al-Sharqiyah lead. Aside from fair higher learning at UTAS-Ibra, territorial improvement is given by rousing a culture of inquire about and consultancy. Through its colleges- Engineering & Technology, Computing & Information Sciences, Economics & Business Organization and Preparatory Consider it leads connected inquiries about industry-orientated consultancy and cross-disciplinary ventures supporting the vision of Vision 2040.

The last few years have also seen UTAS-Ibra making conscious moves toward the development of its research culture by motivating faculty members to publish in high-indexed Scopus and Q1/Q2 journals, applying research findings in pedagogy and students' work, developing consultancy work, and interdepartmental and international collaborations. Largely, these have been cumulative but steady development toward vibrant research culture rather than mere traditional teaching.

This paper reviews the extent to which UTAS-Ibra has developed a culture of research and the extent to which its activities matter for Oman Vision 2040, through trends in faculty publishing, integration of research into teaching, consultancy output, and interdepartmental collaborations (Fussy, 2026; Hammad & Al-Ani, 2021; Lomer & Al Furqani, 2024). It tries to judge current progress against strengths and weaknesses and challenges that exist now with actionable strategies toward attaining sustainable growth in the future. In carrying out this study, however, what comes out clearly is the extent to which UTAS-Ibra can be considered a model institution for other regional universities if they wish to contribute meaningfully toward improving Oman's research and innovation environment (Ankrah & Omar, 2015; Gu & Zhang, 2023).

II. Literature Review

2.1 The Role of Higher Education Institutions in National Development

Higher Education Institutions (HEIs) are traditionally seen as the creators of innovation, knowledge, and social-economic development in a country (De Wit & Altbach, 2021). In Oman Vision 2040, HEIs have been placed at the center of driving the economy to become a knowledge-based economy where innovation, research, and sustainable development would be pillars for building the nation. The academic offering in HEIs has to go hand in hand with consultancy work and strategic alliances that have an immediate effect on aspects such as renewable energy, artificial intelligence, and digital transformation toward national goals. Within the context of challenges at the GCC, HEIs noted were lower availability of research grants, imbalanced faculty research engagement, and poor industry-academic linkages. Strategic policy interventions by way of short- to mid-term research projects that align with national priorities and incentives for research at national levels have matured infrastructure for research and boosted publication in Scopus and Web of Science journals on the visibility and international reputation of institutions. Such examples are Ministry of Higher Education, Research, and Innovation (MoHERI) establishing through the Block Funding Programme (BFP), a performance-based institutional funding model to support short- to mid-term research aligned with national priorities (Hicks, 2012; Wider et al., 2025)

2.2 University Research Culture

Research culture is a multi-faceted composition of institutional policies, and faculty incentives; financing arrangements; collaborative routines, mentorship schemes, and collaboration networks (Almazroui & Shatnawi, 2024). It denotes the process of knowledge production through the normative, value-based, and practical prescription towards building scholarly endeavors.

Rewards and inspiration of faculty are very key in trying to encourage research. This has been seen through remuneration for publishing in top-ranked journals as well as research awards that will be presented, which encourages participation by the faculty.

Support and infrastructure have a major role in the capacity building of research. Advanced laboratory facilities, data bases, and electronic networks within the availability for research supply support both the quantity and quality of research.

Teaching Nexus, or the integration of teaching and research impacts the critical thinking of the students and builds a pipeline of prospective researchers. This can be ensured by integrating research into the curriculum (Jackson, 2015).

National and international collaboration strengthen research activities through collaboration networks. Interdisciplinary knowledge sharing, co-authorship, and human capacity development are increased by such networks. Easier matching of the research agendas of institutions with national and international agendas is facilitated by interdisciplinary research. (Abramo et al., 2011; Frantz et al., 2022; Davey et al., 2018).

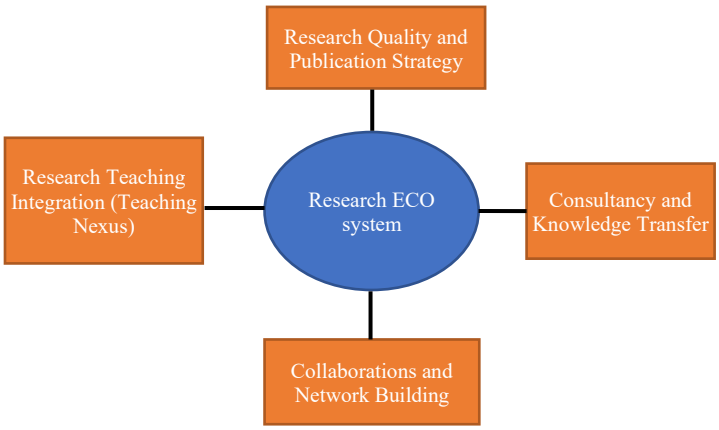

Fig. 1 Conceptual Framework for Developing a Research Ecosystem

Consultancy is the interface between industry and academia that facilitates the conversion of research output into utilization, for economic and social benefit (Healey et al., 2014). Consultancy projects in applied universities play a role in national economic diversification, problem-solving for industry, and additional income generation (Perkmann et al., 2013; Fumasoli et al., 2020). When strategically aligned with the institutional research priorities, consultancy contributes to institutional reputation and measurable national impact. Scopus Q1 and Q2 journal publications are the world's best-accepted measures of research quality and impact (Mongeon & Paul-Hus, 2016). High-impact journal publications build institutional reputation, global recognition, collaboration, and research funding opportunity. Quality is quantity. Vision 2040 is about research quality, national priority alignment, and how much does it matter to socio-economic development.

Despite heightened research outputs, the HEIs in the GCC, including Oman, are faced with several challenges (Al-Marzouqi & Arabi, 2022). These vary from low industry-sponsored research, leading to low applied impact; asymmetry in research productivity between departments; low mainstreaming of research into undergraduate programs; and international collaboration boundaries due to geographical or administrative factors (Hashan et al., 2022). These matters have to be tackled through policy interventions at the system level, institutional incentives, as well as strategic alignment with national development priorities.

It is feasible from literature and institutional policies to design a conceptual framework as laid down in fig. 1 in an attempt to create a research environment for UTAS-Ibra. These four interconnected fields are nested within this framework.

Research quality and publication plan involve prioritizing high-impact journals (Scopus Q1-Q2) and thematic alignment with Vision 2040 strategic themes (e.g., renewable energy, AI, and sustainable materials). In addition, monitoring publication output and citations allows for measuring global visibility and influence (Meho & Yang, 2007; Carusi & Bianchi, 2019).

Research and teaching integration, or Teaching Nexus, entails embedding research outputs and projects within the curriculum to enhance students' learning, engagement, and acquisition of research skills (Visser-Wijnveen et al., 2016; Jenkins et al., 2007). It provokes students' discovery learning through real-world problems and case studies, engages students in research projects by faculty members and joint publications, and facilitates undergraduate research programs and final-year projects with a focus on original inquiry (Zamorski, 2002; Lee-Post, 2019).

Consultancy and knowledge transfer are through active interaction with local and global industry for the application of research for societal and economic good. This includes consultancy management as a research, curriculum, and skill development feedback loop; setting up an intellectual property management unit, industry liaison, and consultancy contracts; and using professional networks in sensing consultancy opportunities and knowledge gaps.

Collaboration and network building involve the creation of national and international collaborations to facilitate interdisciplinary research and capacity development. This encourages faculty mobility, joint publications, and facilities sharing, as well as sponsoring faculty and student participation in national and international conferences.

III. METHODOLOGY

The study uses a descriptive case study approach in a proposal to offer an in-depth and comprehensive study of the research and consultancy climate in UTAS Ibra for the 2024-2025 academic year. Institutional practices, academic staff input, and responsiveness of research endeavors to the objectives of Oman Vision 2040 are the focal points in the study.

A descriptive case study design was employed owing to its ability to explain the subtleties of research practice in institutions, provide quantitative and qualitative data about faculties' roles, and probe real-world environments and interrelation between research, teaching, and consultancy activities. Such a design allows the research study to probe close into UTAS Ibra's culture of research without losing useful information for policy and strategic planning.

The primary source of data is the institutional report: "Research & Consultancy Contributions by the Faculties of UTAS Ibra for AY 2024-2025". The report includes quantitative and qualitative figures on several dimensions of research and consultancy performance.

Research and conference participation of faculties includes the number of participants in national conferences, international conferences, and the breakdown of research into 17 theme areas.

Publication quality and distribution consist of publications classified in terms of Scopus journal quartiles (Q1–Q4), Scopus-indexed non-quartile, and non-Scopus journals.

College-wise faculty performance consists of number of faculty by college and total citation numbers by college.

Integration of teaching-research consists of assessment of research output in courses conducted during Fall and Spring semesters.

Faculty consultancy contributions consist of consultancy work classified by college and type of involvement.

Collaborative research involves faculty participation in collaborative research with local and foreign organizations.

Data were obtained and collated from the institutional report. Additional data were obtained from institutional repositories and annual academic reports, consultancy project, and

collaborative documents. Data collection ensured accuracy, completeness, and consistency of data for all colleges and fields of research.

Data were analyzed employing a combination of comparative charts, descriptive statistics, and thematic analysis as shown in fig. 2 in order to achieve the study objectives.

Quantification of research production includes percentage of high-quality (Scopus Q1–Q2) publications, as well as publication production per college and per faculty.

Decision on institutional strengths involves determining top-performing research fields and the most productive research colleges in research, consultancy, and collaborations.

Measurement of teaching-research integration considers how extensively courses have incorporated faculty research and involves a "Teaching Nexus" analysis to determine the diffusion of research-led teaching across colleges.

Impact measurement applies citation rates and advisory roles as indicators of academic influence and social impact. Multi perspective analysis allows the provision of a holistic view of UTAS Ibra's academic culture by placing it in context with respect to Oman Vision 2040's objectives in innovation, the knowledge economy, and capacity building through higher education.

IV. Results and Discussions

Records show 84 publications for AY 2024-2025. The per journal quality distribution is key to measuring if there has been careful heeding of Vision 2040's call for excellence. Fig. 3 reveals that productivity is high in some fields. Energy Conversion & Control Systems (12 papers) and Wireless Communication & Network Technologies (7 papers) are salient and spot on with Vision 2040's renewable energy and digitalization foci. Excellence in Sustainable Materials and AI applications also proves the alignment of the university research to national priorities.

The distribution of UTAS-Ibra's research output during the academic year 2024–2025 reveals that there was a total of 84 reported publications across various disciplines as shown in fig. 4. The orientation by journal quality index reveals high focus on high-impact journals. Specifically, 39% of the publications were located in Q1 journals, representing the top quartile of the world's scholarly publishing.

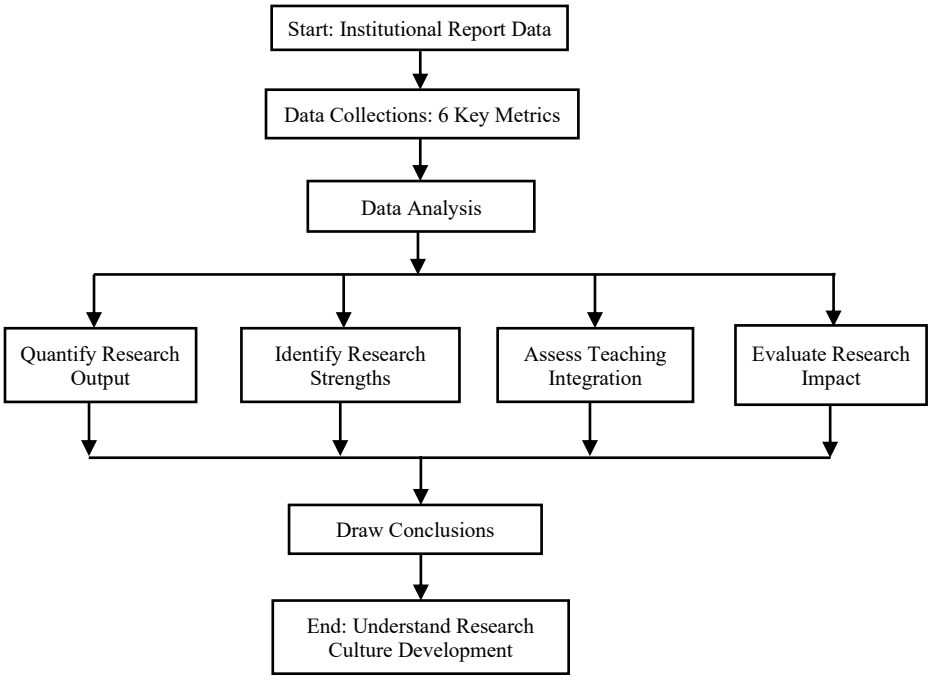

Fig. 2 Flow Chart

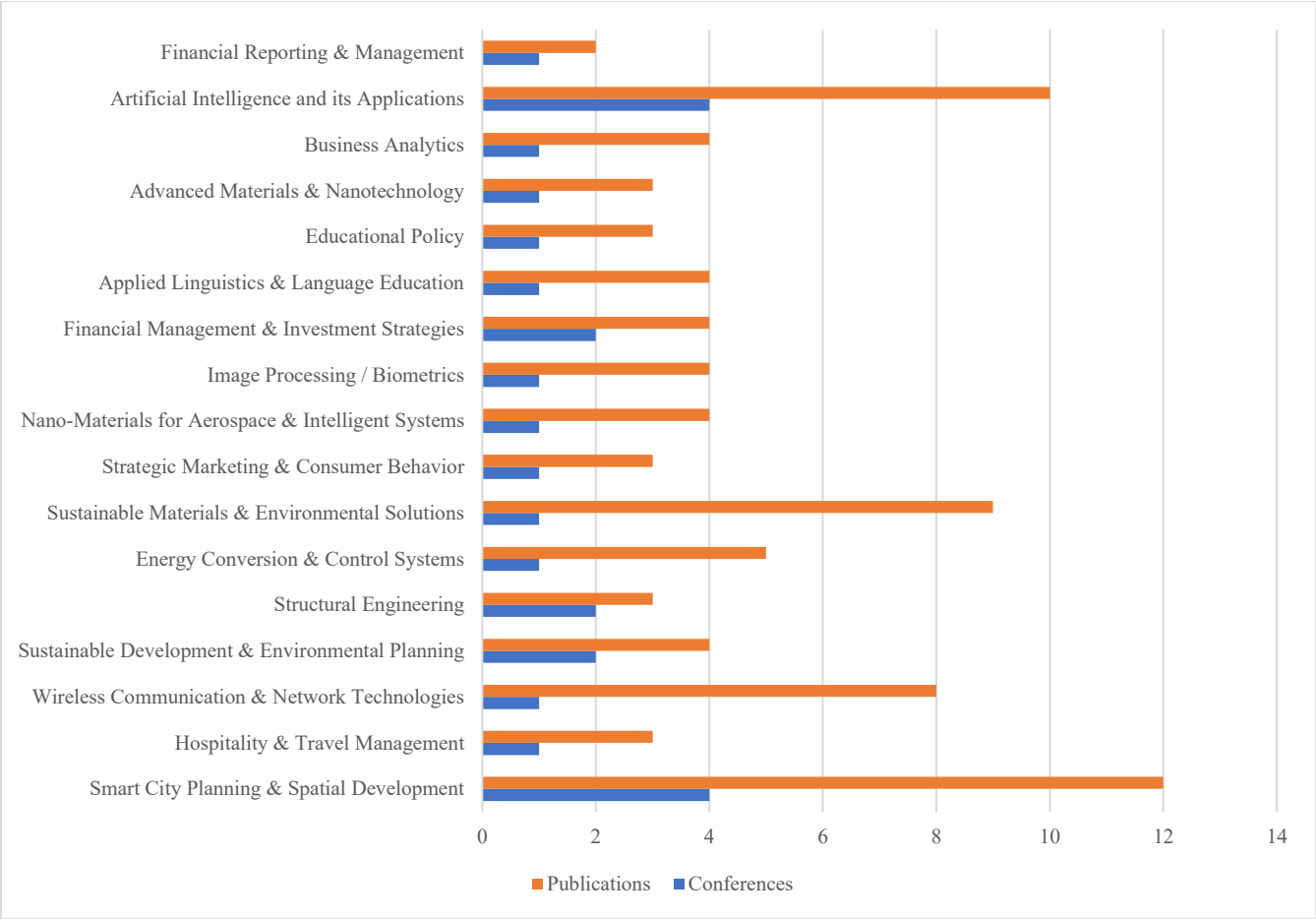

Fig. 3 Faculty Involvement in Conferences and Publications Across Various Fields

Publications in Q2 and Q3 journals are at 7% in either type of journal, while publications in Q4 journals constitute 3% of the total output. Also, 30% were in Scopus non-quartile classified journals and 14% were in non-Scopus journals. This division reflects a shift toward an emphasis on the quality rather than the quantity of research. The fact that close to two-fifths of faculty publications can find their way into Q1 journals is an indicative pointer to convey that UTAS-Ibra researchers are more concerned with making it into the high-ranking and internationally reputed publications placement necessary for institutional reputation building, citation visibility, and international connections.

Minmal publications in Q2 and Q3 denote those areas which can be further developed by diversifying publication methods in these fields for the faculty to increase their scholarship. On the contrary, the meager percentage of just 17% of Q4 and non-Scopus publications ensures that the faculty is staying away from low-level journals, thus institutional research having an orientation toward quality on international standards.

The "Teaching Nexus" as shown in fig. 5 is equally a highly innovative and pioneering venture. In bringing in the use of research papers and findings into curriculum content within all colleges (Economics, Engineering, Computing), UTAS Ibra performs two functions simultaneously:

1. It advances the quality of education by providing access to ancillary knowledge, outside the scope of the typical textbook.
2. It creates a "research-talent pipeline" by encouraging student interest in research right from the undergraduate stage, directly addressing the human capital development goals of Vision 2040.

This tradition injects the culture of inquiry into the learning process, and research becomes the inherent and natural part of the academic environment. Needs improvement by all the academic departments to perform in the upcoming academic year to enhance the teaching nexus.

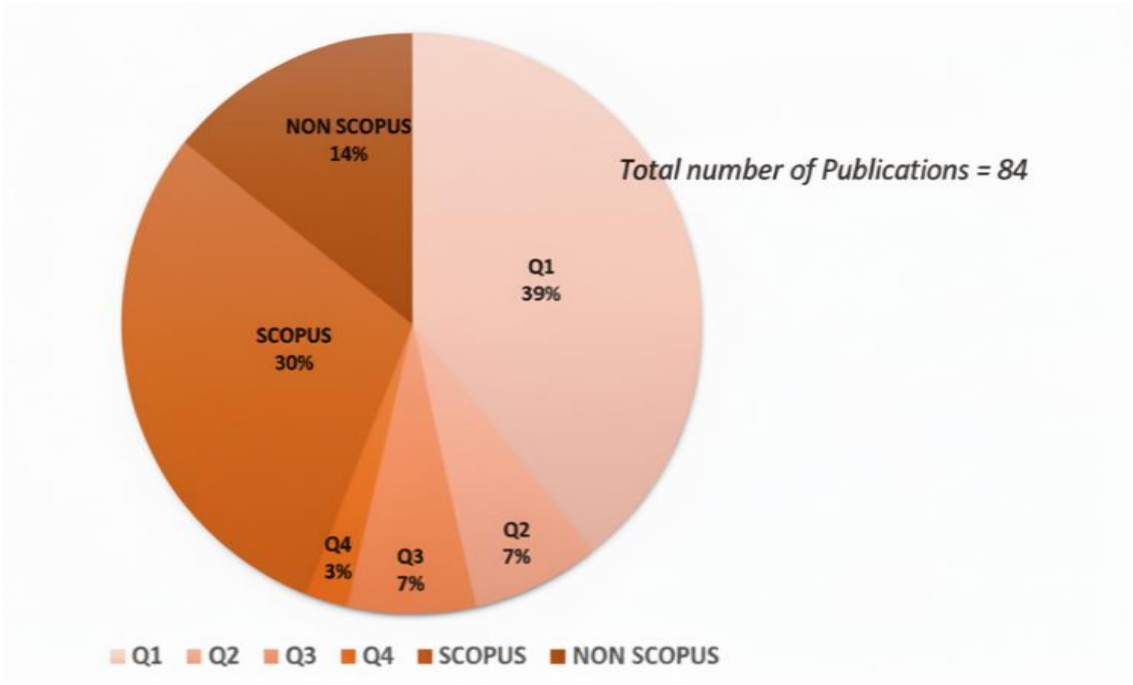

Fig. 4 Distribution of Branch Faculty Publications by Journal Quality Index

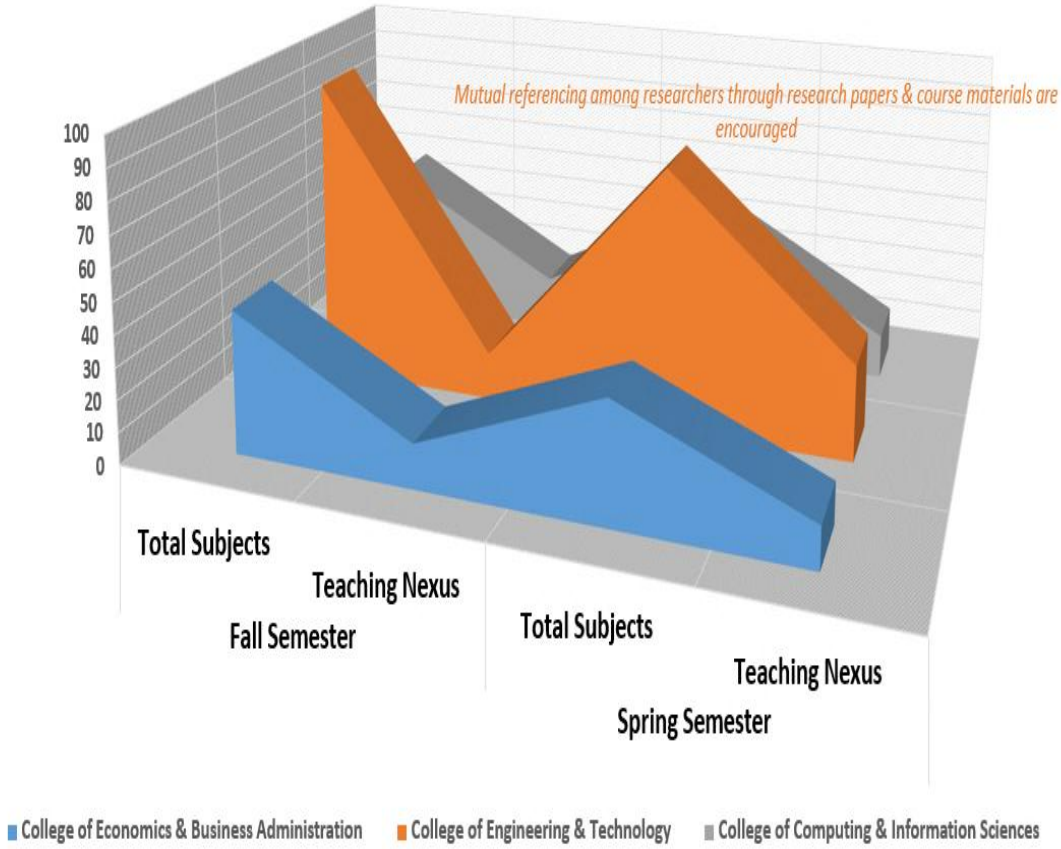

Fig. 5 College-Wise Subject and Teaching Nexus Overview

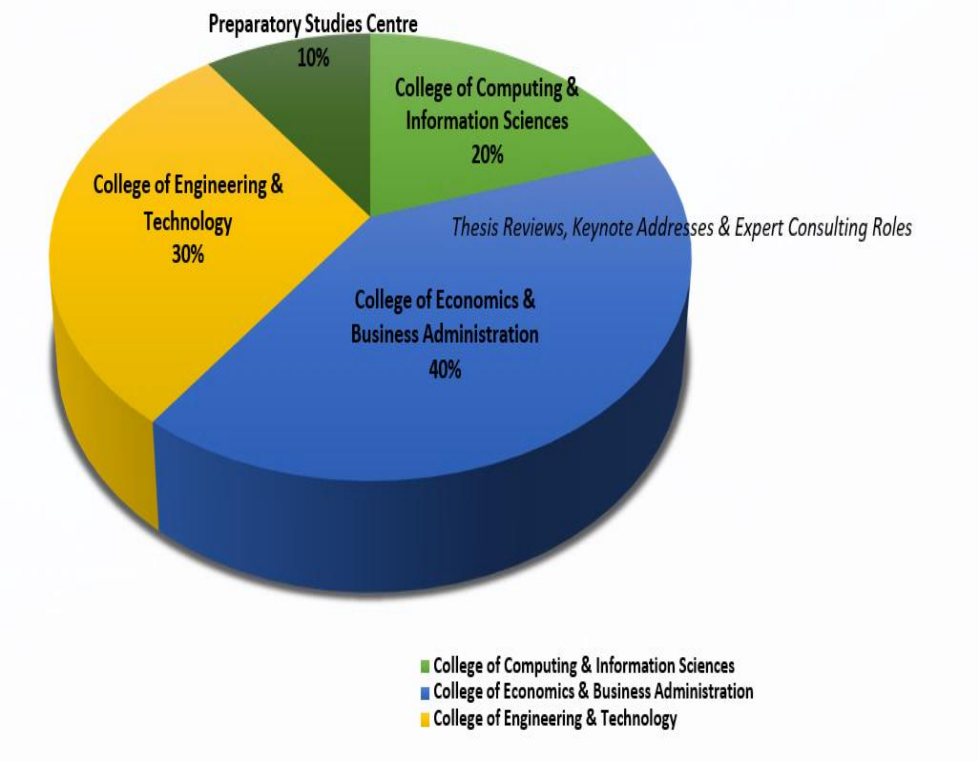

Fig. 6 College-wise Faculty Engagement on Consultancy Activities

Consultancy services as shown in fig. 6 are where UTAS Ibra's applied mission is in the foreground. The dissemination is evocative: Such a high rate is indicative of direct relevance of skills in fields such as strategic marketing, financial management, and consumer behavior to the local business community.

Engineers provide professional consulting in structural construction, energy infrastructure, and green city planning to directly serve national infrastructure goals.

IT consultancy, network security, and implementation of AI is increasingly becoming crucial for modernizing the public and private sectors. Activities like thesis critique and keynote presentations make UTAS scholars nationals' specialists, which adds to the prestige of the institution and opens good networks for collaborative research and employment placement.

As shown in fig. 7, UTAS-Ibra had research collaborations at the national and international levels in all its colleges. The research collaborations were divided as follows: Business (35%), Engineering (30%), Computing (20%), and Preparatory (15%).

These statistics prove purposeful prioritization of forming collaborative partnerships across disciplines and boundaries through which varied academic and industry network expertise and resources can be brought to the institution. Increased collaborative research activity improves knowledge exchange, co-publications, and capacity building in the university. The data for the academic year 2024-2025 prove that UTAS-Ibra is increasingly adjusting its research and consultancy work to align more with the strategic goals of Oman Vision 2040 in knowledge-based development, innovation, and internationalization. UTAS-Ibra's research output has been significantly disseminated through first-tier journals, Q1 ranked. This shows not only quality but also relevance and international visibility of the university's research output. Applied consultancy services addressing practical problems for the benefit of industry and community stakeholders complement institutional research outputs.

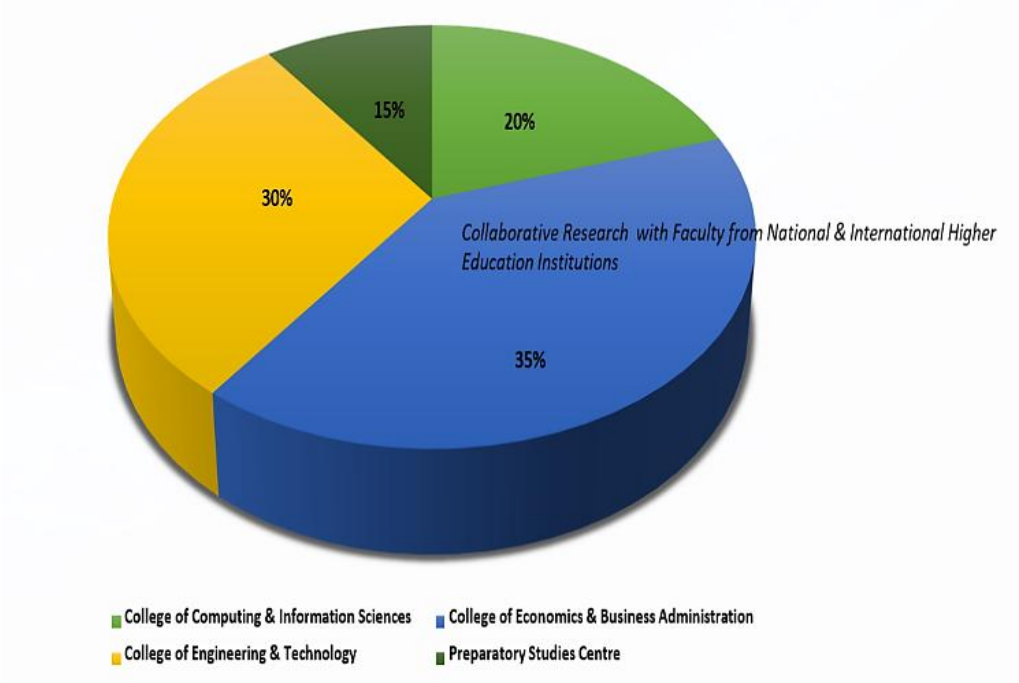

Fig. 7 College-wise Faculty Engagement on Collaborative Research

While high-impact work is robust, contributions to mid- and lower-impact journals are relatively modest, suggesting potential for the underutilization of other dissemination routes.

A clear deficit is present in research work sponsored by the industry itself, which might limit channels for applied innovation, as well as actual-world impact.

Outputs of research vary significantly across departments, hence the need to have participation and capacity-building events that are more balanced in all academic departments. Academic staff has to take an active role in integrating research outputs into pedagogy, enhancing students' learning and promoting a research-oriented academic culture. Oman Vision 2040 gives priority to diversification of knowledge-based economies, sustainable development, digital economy transformation, and research competitiveness at the global level. UTAS-Ibra research clearly lends support to numerous pillars. Financial Management & Investment Strategies, Business Analytics, and Strategic Marketing & Consumer Behavior research contributes to SME growth, financial inclusion, and entrepreneurial ecosystems earlier National Program for Enhancing Economic Diversification targets.

Sustainable Materials Research, Energy Conversion, and Environmental Planning directly support Oman's Net-Zero 2050 strategy and circular economy policies.

The 35% international collaborative research engagement by the faculty and 40% consultancy foster knowledge transfer and industry relevance, which is necessary in creating national talent pipelines. In spite of this, there are gaps. Underrepresentation of Smart City Planning, Wireless Communication, and Hospitality & Travel Management limits Oman's National Strategy for Urban Development and Logistics Strategy 2040 contributions. The 14% non-SCOPUS publication rate and inconsistent institutional affiliation (Page 3) also weaken visibility globally and limit Oman's vision to become one of the top 50 countries of the Global Innovation Index by 2040. Indexing and discoverability remain a key focus area since, though it is important that the percentage of Scopus- and Web of Science–indexed publications increase, it is important that all papers carry an equal institutional affiliation ("University of Technology and Applied Sciences – Ibra") to accurately represent institutional research output. By size and sustainability, 84 publications are a welcome improvement, but per-faculty productivity and total citation scores reveal scope to increase. This requires remedy through strategic appointment of research-active staff and provision of protected research time to optimize output. Furthermore, applied impact and knowledge transfer have to be enhanced through systematic tracking prototypes, industrially commissioned research, and policy uptake. Although areas of research are wide, problem-focused and interdisciplinary studies need to be enhanced with facilitation of collaborations towards Oman's national projects. Mechanisms to support research also need upgrading, particularly in the facilitation of internal grant proposal writing, ethics approval procedures, and training for targeting high-impact factor journals and open-access publication.

Strengthened industry and government collaboration through the use of targeted partnerships with strategic national institutions—such as energy corporations, municipal authorities, healthcare centers, and ministries—will ensure that research directly addresses Oman's development agenda. Consultancy work can be converted into collaborative

applied research with mutually agreed performance measures and co-funding arrangements.

A monitoring dashboard by the Research and Consultancy Department should display KPIs on a quarterly basis. Within the next two to three years, goals may be articulated toward increasing publications per full-time research faculty by 25%, increasing Scopus-indexed output from 30% to a minimum of 50%, maintaining or increasing the Q1/Q2 proportion, increasing external research income by 20% yearly, and yielding not less than three concrete technology transfer cases.

V. CONCLUSIONS

The 2024-2025 review of UTAS Ibra research and consultancy performance has taken the picture of an institution in a state of dynamic development. The prioritized strategic initiatives for fostering Scopus indexed publications, integrating research meaningfully into teaching, actively seeking consultancy, and collaboration have laid down the foundation for establishing a research culture explicitly linked to achieving Oman Vision 2040 goals. The university has identified strengths which it is already capitalizing on in strategic fields of Energy, AI, Computing, and Sustainable Development. High consultancy activity indicates direct social and economic impact in the region. Introducing Teaching Nexus is a visionary approach toward building a sustainable research culture from scratch. Although all development has been positive so far, becoming a powerhouse in research is an excellent journey that never ends. Future Developments proposed are just another logical step further with more Quality than Quantity, more Internationalization, and even more intensive Industry Embedding. By following this strategic direction, UTAS Ibra is not only raising its own academic stature but also playing a practical role towards the knowledge-based economy that is envisioned for Oman by 2040.

VI. FUTURE PROSPECTS

Future Developments for Strengthening Research Culture in UTAS-Ibra. To further sustain and develop the research culture, UTAS-Ibra shall practice some activities that will lead to the improvement of quality, visibility, and the impact of research towards the Oman Vision 2040. These fields of development are- Create formal consultancy partnership development with Omani SMEs and MNCs Academic expertise is ensured through applied research output to actual industrial challenges being addressed. Organized partnerships can also open up new revenue streams, new internship slots for students, access to industry-standard infrastructure for carrying out advanced research. Brand faculty and research department as solution providers for all problems existing within the industry. Plan to host an industry-academia forum where student projects, faculty expertise, and institutional capability can be showcased. Student projects may be associated with Vision 2040 sectors-energy renewables, digital transformation, health & smart manufacturing-so that synergy happens and social relevance is realized. Connect students with faculty mentors and industry advisors, then align student research with community needs, industry challenges, or national priorities. Sign MoUs with the top universities, research institutes, and innovation hubs. Future strategic partnerships with QS-ranked universities around the world would increase joint publications, collaborative grants, and student exchange opportunities. This improves the quality of research, exposes students to state-of-the-art methodologies, and puts UTAS-Ibra on the map internationally in favor of Oman Vision 2040 higher education internationalization goals. Future horizons recommend that R&D be steered toward Oman Vision 2040 via thematic areas—these are intelligent and sustainable cities focused on IoT integration in space planning and citizen services; renewable energy and energy conversion that supports national transitions to cleaner energy systems; plus innovative material research supporting domestic industries from aerospace to construction. Also, work on drones and wireless nets for far talks and smart uses in learning and health will meet key country needs. Last, joined social-economic study must look at the wider effects of tech and learning on business spread to ensure that UTAS Ibra study keeps making both place betterment and unit greatness.

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