

Research Capability Building, Industry Collaboration, and Institutional Support on Academic Productivity of Hospitality and Tourism Educators: Inputs to Development Plan

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ABSTRACT

Research productivity in hospitality and tourism higher education is increasingly shaped by the interaction of faculty capability, institutional support, and industry engagement. This study examined research capability building, industry collaboration, institutional support, implementation constraints, and proposed development inputs among selected higher education institutions in Metro Manila, Philippines. A quantitative descriptive-correlational design involved 278 participants comprising 18 administrators, 169 faculty members, and 91 industry partners. Data were gathered using a structured questionnaire subjected to expert review and pilot testing and were analyzed using descriptive and inferential statistical procedures. Research capability building ($M = 4.48$), industry collaboration ($M = 4.47$), and institutional support ($M = 4.44$) were rated highly evident. Research agenda alignment, internship and practicum coordination, and institutional research incentives emerged as the strongest dimensions. Major constraints included complex grant procedures, limited international research exposure, academic–industry scheduling conflicts, insufficient administrative research support, limited database access, and workload demands. The proposed development inputs were rated highly suitable ($M = 4.31$), highly acceptable ($M = 4.34$), and highly feasible ($M = 4.35$). The findings indicate that academic productivity is supported by an interconnected research ecosystem in which faculty research capability, enabling institutional conditions, and sustained university–industry collaboration operate as mutually reinforcing mechanisms. The study provides an evidence-based foundation for strengthening research capacity, institutional support systems, and collaborative knowledge production in hospitality and tourism higher education.

Keywords: academic productivity; research capability building; institutional support; university–industry collaboration; hospitality and tourism education; higher education institutions

INTRODUCTION

Hospitality and tourism education increasingly operate within a knowledge-intensive environment shaped by digital transformation, sustainability, service innovation, and rapidly changing industry expectations. Higher education institutions (HEIs) are therefore expected not only to prepare employable graduates but also to generate research that informs policy, improves professional practice, and contributes to sectoral development. Within this context, faculty research productivity has become an important indicator of institutional research capacity, academic quality, and knowledge contribution.

Research productivity, however, is not determined by individual competence alone. Productive research environments typically combine methodological capability, mentoring, leadership support, access to resources, protected research time, incentives, and collaborative networks. From the Knowledge-Based View, faculty expertise represents a strategic knowledge resource whose value depends on the institution’s capacity to develop, integrate, and apply knowledge effectively (Grant, 1996). Research-environment scholarship similarly emphasizes the importance of clear research goals, mentoring, communication, collaboration, and adequate institutional resources in sustaining scholarly productivity (Bland & Ruffin, 1992).

Research capability building strengthens educators' competencies in research design, data analysis, scholarly writing, grant development, publication, and dissemination. However, capability-building initiatives may have limited impact when faculty members lack access to research funding, databases, administrative assistance, expert mentoring, or adequate time for research. Institutional support therefore serves as an enabling mechanism that allows faculty research capability to be translated into completed, disseminated, and potentially impactful scholarly outputs.

Industry collaboration is equally important in hospitality and tourism education because the relevance of research often depends on access to enterprises, practitioners, field-based information, and emerging sector concerns. Collaboration may include joint research, case studies, consultancy, advisory participation, conferences, student–industry projects, internship coordination, and the development of policy or industry-oriented papers. Such engagement can strengthen the practical relevance of academic research while facilitating knowledge exchange between HEIs and industry stakeholders.

In the Philippine context, higher education increasingly emphasizes research, innovation, quality enhancement, and stronger academic–industry linkages. These priorities are particularly relevant to hospitality and tourism programs, where research must remain responsive to evolving workforce requirements, technological developments, sustainability concerns, and industry practices. Examining research capability building, institutional support, and industry collaboration as interconnected conditions may therefore provide a more comprehensive understanding of the factors associated with faculty academic productivity.

Although previous studies have examined faculty research competence, organizational support, and university–industry collaboration, these dimensions have often been investigated separately. Limited empirical attention has been given to how administrators, faculty members, and industry partners collectively perceive the research ecosystem within hospitality and tourism education. This study addresses this gap by examining research capability building, industry collaboration, institutional support, implementation challenges, and stakeholder validation of proposed development inputs intended to strengthen the academic productivity of hospitality and tourism educators.

METHODOLOGY

The study employed a quantitative, descriptive-correlational design to examine research capability building, industry collaboration, institutional support, and academic productivity among hospitality and tourism educators. The descriptive component determined the levels of the major study variables and identified implementation constraints, while the correlational component examined their associations without manipulating existing institutional conditions.

The study involved 278 participants, comprising 18 administrators, 169 faculty members, and 91 industry partners from selected public and private higher education institutions (HEIs) in Metro Manila offering hospitality and tourism programs. The participating institutions included Eulogio “Amang” Rodriguez Institute of Science and Technology, Far Eastern University, Jose Rizal University, National Teachers College, National University, Philippine Women’s University, and Polytechnic University of the Philippines. Purposive sampling was employed to select participants with relevant experience in hospitality and tourism education, research activities, institutional management, and academic–industry collaboration.

Data were collected using a structured questionnaire developed from relevant literature and aligned with the study objectives. The instrument measured research capability building, industry collaboration, institutional support, academic productivity, implementation constraints, and the suitability, acceptability, and feasibility of the proposed development inputs using a five-point Likert-type scale. Content validity was established through expert evaluation, while pilot testing was conducted to assess item clarity and internal consistency prior to full administration.

Ethical approval was obtained from the Research Ethics Committee of St. Paul University Manila under Ethics Review Clearance for Proposal No. 2026-010-EDA-CBM, issued on January 31, 2026. Participation was voluntary, informed consent was secured from all participants, and confidentiality, anonymity, and responsible

data management were maintained throughout the study.

Descriptive statistics, including means and rank ordering, were used to summarize the study variables. One-way analysis of variance (ANOVA) was employed to examine differences in assessments among administrators, faculty members, and industry partners, while Pearson product-moment correlation was used to examine associations among the principal study variables and academic productivity. Statistical significance was evaluated at $\alpha = .05$. All inferential analyses should be based on verified respondent-level observations, with degrees of freedom, effect estimates, and significance values corresponding to the final analytic sample.

RESULTS AND DISCUSSION

Research Capability Building

Table 1. Assessment of research capability building

Dimension	Administrators	Faculty	Industry partners	Composite M	Rank
Training and seminars on research methodologies	4.53	4.48	4.44	4.48	3.5
Mentorship and coaching programs	4.45	4.40	4.45	4.43	6
Access to research grants and funding	4.49	4.41	4.50	4.47	5
Incentives and recognition for publications	4.56	4.44	4.47	4.49	2
Opportunities for international research exposure	4.51	4.42	4.50	4.48	3.5
Research agenda alignment with national/institutional priorities	4.57	4.44	4.51	4.51	1
Overall mean	4.52	4.43	4.48	4.48	—

Research capability building was rated highly evident overall ($M = 4.48$). Research agenda alignment ranked first ($M = 4.51$), followed by incentives and recognition for publications ($M = 4.49$), while mentorship and coaching received the lowest composite rating ($M = 4.43$), although it remained favorable. These findings indicate that the participating institutions have established strong strategic direction, professional development opportunities, recognition systems, and research support mechanisms.

However, the comparatively lower rating for mentoring suggests a need for more individualized research guidance and improved access to funding to help translate institutional research priorities into sustained scholarly productivity. This finding is consistent with Pascua (2025) and Camilon et al. (2024), who emphasized the importance of comprehensive institutional support systems in strengthening faculty research capacity and academic productivity.

Industry Collaboration

Table 2. Assessment of industry collaboration

Dimension	Administrators	Faculty	Industry partners	Composite M	Rank
Joint research and case studies with industry partners	4.50	4.39	4.47	4.45	4.33
Participation in consultancy and advisory boards	4.52	4.40	4.42	4.45	4.33
Co-authoring of policy papers or white papers	4.47	4.42	4.46	4.45	4.33
Networking and industry conferences	4.49	4.46	4.52	4.49	2

Student-industry collaborative projects guided by faculty	4.48	4.44	4.47	4.46	3
Internship/practicum coordination with industry stakeholders	4.52	4.52	4.47	4.50	1
Overall mean	4.50	4.44	4.47	4.47	—

Industry collaboration was rated highly evident overall ($M = 4.47$). Internship and practicum coordination ranked first ($M = 4.50$), followed by networking and industry conferences ($M = 4.49$), while joint research, consultancy, and policy co-authorship received slightly lower ratings ($M = 4.45$ each). This pattern indicates that collaboration is strongest in experiential and professional engagement but may be further strengthened through sustained joint research, data sharing, consultancy, and policy-oriented knowledge production. The findings are consistent with Guerrero and Urbano (2021) and Alvarez (2022), who emphasized that university–industry partnerships may progress from experiential engagement and networking toward more advanced research and innovation collaboration.

Differences among respondent groups

Table 3. Source-reported one-way ANOVA of research capability and industry collaboration

Indicator	F(2,21)	Interpretation
Research methods training	0.259	Not significant
Mentorship and coaching	0.231	Not significant
Research grants and funding	0.652	Not significant
Publication incentives and recognition	1.712	Not significant
International research exposure	0.818	Not significant
Research agenda alignment	2.132	Not significant
Joint research and case studies	0.809	Not significant
Consultancy and advisory boards	1.559	Not significant
Policy/white-paper co-authorship	0.230	Not significant
Networking and industry conferences	0.661	Not significant
Student-industry collaborative projects	0.247	Not significant
Internship/practicum coordination	0.290	Not significant

No significant differences were reported among administrators, faculty members, and industry partners across the assessed research capability and industry collaboration indicators, indicating broad perceptual alignment among stakeholder groups. However, similar assessments do not necessarily reflect identical experiences, access, or levels of participation, which may warrant further qualitative investigation. The findings are consistent with Cai and Ahmad (2021), who emphasized the importance of stakeholder alignment and institutional coordination in sustaining academic–industry partnerships.

Institutional support on academic productivity

Table 4. Assessment of institutional support on academic productivity

Dimension	Administrators	Faculty	Industry partners	Composite M	Rank
Availability of research centers and laboratories	4.48	4.34	4.48	4.43	4.5
Administrative support staff for research	4.52	4.37	4.45	4.45	2.5
Funding for conference participation and paper presentations	4.49	4.40	4.47	4.45	2.5
Reduced teaching load for research-active faculty	4.46	4.31	4.46	4.41	6
Access to online databases, journals, and libraries	4.50	4.32	4.47	4.43	4.5

Institutional research incentives and awards	4.52	4.39	4.49	4.47	1
Overall mean	4.50	4.36	4.47	4.44	—

Institutional support was rated highly evident overall ($M = 4.44$). Research incentives and awards ranked first ($M = 4.47$), while reduced teaching load for research-active faculty received the lowest rating ($M = 4.41$), identifying protected research time as a comparatively weaker support mechanism.

Faculty members also provided the lowest overall group rating ($M = 4.36$), underscoring the importance of monitoring how institutional support is experienced by its direct users. These findings are consistent with Garcia (2024) and Pascua (2025), who emphasized that funding, incentives, administrative assistance, and research infrastructure are important in sustaining faculty research engagement and productivity.

Reported association with academic productivity

Table 5. Correlation outputs reported in the source analysis

Indicators	Reported r	df	Reported t
Research methods training	.999	14	3.74150
Mentorship and coaching	1.000	14	3.74156
Research grants and funding	1.000	14	3.74164
Publication incentives and recognition	.999	14	3.74155
International research exposure	.999	14	3.74155
Research agenda alignment	1.000	14	3.74163
Joint research/case studies	1.000	14	3.74159
Consultancy/advisory boards	1.000	14	3.74161
Policy/white-paper co-authorship	1.000	14	3.74164
Networking/industry conferences	1.000	14	3.74161
Student-industry projects	1.000	14	3.74164
Internship/practicum coordination	1.000	14	3.74164

The source analysis reported very strong to perfect positive correlations between research capability, industry collaboration, and academic productivity. However, these coefficients require methodological caution. The reported correlations ($r = .999$ – 1.000), degrees of freedom ($df = 14$), and t values are not mathematically consistent with one another or with the stated sample size ($N = 278$).

Consequently, the reported coefficients should not be interpreted as confirmatory evidence until the respondent-level data have been reanalyzed and the appropriate correlation coefficients, degrees of freedom, and significance values verified. Conceptually, the expected positive relationships are consistent with Kim (2021), Teng et al. (2024), and Romao et al. (2024), who associated university–industry engagement, collaborative research, professional partnerships, and experiential opportunities with stronger scholarly engagement and knowledge production.

Problems encountered in research capability building

Table 6. Highest concerns in research capability building

Implementation concern	Composite M	Rank
Complex and lengthy grant application processes	3.66	1.5
Limited opportunities for international research exposure	3.66	1.5
Limited incentives and recognition for published works	3.65	3
Inconsistent mentorship and coaching programs	3.64	4
Heavy teaching and administrative workload	3.62	5.5
Inadequate monitoring and evaluation of capability initiatives	3.62	5.5

Limited advanced research training	3.60	7.33
Weak research-agenda alignment	3.60	7.33
Limited access to expert research trainers	3.60	7.33
Insufficient institutional/external grant opportunities	3.51	10

Research capability challenges were encountered overall ($M = 3.62$). The most prominent concerns were complex grant processes and limited international research exposure (both $M = 3.66$), followed by publication incentives ($M = 3.65$) and inconsistent mentoring ($M = 3.64$). These findings indicate that research capability building should extend beyond seminars to include streamlined research administration, stronger mentoring, mobility support, incentives, and appropriate workload arrangements. The results are consistent with Niez (2024), Amanonce (2025), and Tolentino (2025), who identified funding procedures, mentoring limitations, incentive structures, and workload demands as barriers to sustained faculty research engagement in Philippine higher education.

Problems encountered in industry collaboration

Table 7. Highest concerns in industry collaboration

Implementation concern	Composite M	Rank
Scheduling conflicts between academic calendars and industry availability	3.71	1
Low industry appreciation/use of academic research outputs	3.66	2
Lack of structured systems for co-authoring policy or white papers	3.65	3
Difficulty securing industry data for research	3.64	4
Weak participation in industry conferences/events	3.63	5
Insufficient support for student-industry collaborative projects	3.61	6
Misalignment between industry priorities and faculty research interests	3.59	7
Limited faculty opportunities for advisory/consultancy roles	3.58	8
Low engagement in joint research projects	3.57	9.5
Internship/practicum coordination challenges	3.57	9.5

Industry collaboration challenges were encountered overall ($M = 3.62$). The most prominent concerns were scheduling conflicts ($M = 3.71$), limited industry appreciation of academic research ($M = 3.66$), and weak structures for co-authored policy outputs ($M = 3.65$). These findings indicate a need for coordinated planning, formal data-sharing arrangements, clearly defined research partnership mechanisms, and stronger articulation of mutual benefits for industry partners. The results are consistent with Bernarte (2023, 2024), Armas (2025), and Guerrero and Urbano (2021), who identified coordination gaps, unclear collaboration structures, and limited stakeholder engagement as barriers to sustained university–industry partnerships.

Problems encountered in institutional support

Table 8. Highest concerns in institutional support

Implementation concern	Composite M	Rank
Insufficient administrative support staff for research	3.56	1
Limited access to updated databases and journals	3.55	2
Limited/inadequate research centers and equipment	3.53	3.5
Inconsistent monitoring and evaluation of support systems	3.53	3.5
Restricted conference participation funding	3.52	5.5
Inconsistent teaching-load reduction policies	3.52	5.5
Slow/complicated requests for research resources	3.51	7.5
Low prioritization of research incentives and awards	3.51	7.5
Insufficient institutional budget allocation	3.50	9
Inadequate orientation on digital research tools	3.48	10

Institutional support challenges were encountered overall ($M = 3.52$). The most prominent concerns were insufficient administrative research support ($M = 3.56$) and limited access to updated databases and journals ($M = 3.55$), while research infrastructure, workload arrangements, resource-access procedures, and budget support also remained relevant. These findings indicate that although the research environment is generally supportive, stronger operational systems are needed to sustain faculty productivity. The results are consistent with Garcia (2024), Hipolito and Santos (2025), and Niez (2024), who emphasized the importance of administrative assistance, research infrastructure, funding accessibility, and supportive workload policies in strengthening faculty research engagement.

Comprehensive Research and Industry Collaboration Development Plan

The findings were translated into a development plan designed to strengthen the full research pathway from capability development to publication, industry engagement, and institutional support. The plan emphasizes integrated rather than stand-alone interventions so that research training is supported by mentoring, protected time, resources, collaboration mechanisms, and continuous monitoring.

Table 9. Evidence-to-action development plan

Priority area	Objective	Strategic actions	Lead roles	Time frame	Success indicators
Advanced research capability	Strengthen methodological and publication competence	Advanced methods clinics; scholarly writing and grant-development workshops; research ethics/reproducibility sessions	Research Office; Graduate School; external experts	Year 1, recurring	Training completion; manuscripts and grant proposals submitted
Structured mentoring	Provide continuous support from proposal to publication	Mentoring circles; monthly proposal/manuscript clinics; peer-review groups	Research Office; senior faculty; department heads	Start within 3 months	Mentor coverage; project completion; submission rate
Protected research time	Reduce workload barriers	Transparent workload credit; research release time; scheduled writing/data-analysis periods	Academic Affairs; HR; deans	Pilot 1 academic year	Reduced delayed projects; higher completion rate
Grant and resource access	Simplify access to research resources	One-stop grant support; seed grants; conference support; databases; analytical tools	Research Office; Finance; Library; ICT	Year 1	Processing time; utilization; funded projects
Industry research partnership	Deepen collaboration beyond practicum	Shared research agenda; joint studies; data-sharing protocols; consultancy; co-authored policy outputs	Industry Linkages Office; faculty; partners	Biannual cycle	Active joint studies; co-produced outputs
Monitoring and analytics	Use evidence for continuous improvement	Research dashboard; milestone tracking; publication/grant	Research Office; QA; ICT	Dashboard in 6 months	On-time milestones; output growth;

		monitoring; annual review			closed action items
Internationalization	Expand scholarly visibility and networks	Conference mobility; visiting scholar sessions; co-authorship matching; research consortia	International Affairs; Research Office	Years 1–2	International presentations and co-authored outputs

Suitability, acceptability, and feasibility of the proposed development inputs

Table 10. Stakeholder validation of the proposed development inputs

Criterion	Administrators	Faculty	Industry partners	Composite M	Interpretation
Suitability	4.30	4.31	4.31	4.31	Highly suitable
Acceptability	4.34	4.43	4.26	4.34	Highly acceptable
Feasibility	4.37	4.24	4.44	4.35	Highly feasible

The proposed development inputs received consistently favorable evaluations for suitability ($M = 4.31$), acceptability ($M = 4.34$), and feasibility ($M = 4.35$), indicating broad stakeholder support for their relevance, practicality, and potential implementation. These findings suggest that the plan is aligned with institutional priorities, responsive to identified needs, and supported by organizational readiness and resource considerations. The results are consistent with Navarro (2022), Gomez (2025), and Kucirkova (2025), who emphasized that development initiatives are more likely to gain stakeholder support when they demonstrate strategic alignment, clarity, feasibility, and sustainability. The findings therefore provide empirical support for pilot implementation, although actual effectiveness should be assessed through measurable post-implementation outcomes.

CONCLUSIONS

1. Hospitality and tourism educators in the participating Higher Education Institutions (HEIs) operate within generally supportive research environments characterized by research capability-building initiatives, institutional support mechanisms, and academic–industry engagement.
2. Administrators, faculty members, and industry partners demonstrated generally consistent assessments of research capability building and industry collaboration, indicating broad stakeholder alignment regarding institutional research and partnership initiatives.
3. Institutional support remains important in facilitating faculty research engagement; however, comparatively lower ratings for some mechanisms, particularly protected research time and operational support, indicate areas requiring further institutional attention.
4. Academic productivity in hospitality and tourism education is best understood as a multidimensional outcome associated with the interaction of faculty research capability, enabling institutional conditions, and sustained engagement with industry and professional partners.
5. Despite generally favorable conditions, barriers related to research administration, resource accessibility, workload, international exposure, mentoring, and academic–industry coordination may constrain sustained faculty research engagement and therefore require continuing institutional improvement.
6. The proposed sustainable development plan provides a strategic framework for strengthening research capability, institutional support, and university–industry collaboration through targeted interventions, resource considerations, and monitoring mechanisms responsive to the identified needs.
7. The favorable evaluations of the proposed plan in terms of suitability, acceptability, and feasibility indicate its potential applicability within participating HEIs. Its actual contribution to research

productivity, however, should be established through pilot implementation and subsequent outcome-based evaluation.

RECOMMENDATIONS

1. Higher education institutions may strengthen research capability-building initiatives through regular seminars, advanced training, mentorship programs, and publication workshops designed to enhance the research competence and scholarly productivity of hospitality and tourism educators. Institutions may likewise expand partnerships with industry stakeholders through joint research, consultancy engagements, co-authored publications, and applied research projects.
2. Institutional administrators may sustain effective communication, coordination, and collaboration among administrators, faculty members, research offices, and industry partners to ensure the consistent implementation of research capability-building and industry collaboration initiatives.
3. Higher education institutions may improve institutional support systems by providing faculty members with adequate access to research facilities, laboratories, academic databases, analytical software, administrative assistance, and financial resources necessary for sustained research engagement and academic productivity.
4. Research capability building, industry collaboration, and institutional support may be implemented as integrated and mutually reinforcing institutional strategies. Their significant and positive relationships indicate that coordinated efforts in these areas can contribute to improved academic productivity among hospitality and tourism educators.
5. The identified challenges may be addressed by simplifying research procedures, strengthening mentorship and training, providing appropriate incentives and funding, expanding industry partnerships, improving access to research resources, reducing administrative barriers, and establishing regular monitoring and evaluation mechanisms to support faculty research engagement and academic productivity.
6. The proposed Comprehensive Research and Industry Collaboration Development Plan may be formally adopted and implemented to strengthen research capability building, industry collaboration, institutional support, and academic productivity among hospitality and tourism educators. Its implementation should include clearly defined responsibilities, realistic timelines, measurable performance indicators, and adequate resource allocation.
7. A systematic monitoring and evaluation framework may be established to assess the suitability, acceptability, feasibility, and effectiveness of the proposed development plan. Evaluation results should guide the continuous refinement, updating, institutionalization, and sustainability of the program.
8. Future researchers may replicate the study in other academic disciplines, institutional settings, and regions of the Philippines to validate and extend its findings. Subsequent studies may also examine additional variables, including faculty characteristics, institutional research culture, governance practices, technological integration, funding mechanisms, and emerging hospitality and tourism industry trends.

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