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Developing an Evidence-Based Institutional Research Culture Framework in a State University

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Abstract

This study examined the research culture of Surigao del Norte State University and developed an Evidence-Based Institutional Research Culture Framework grounded in empirical findings and organizational theory. Guided by Schein's Organizational Culture Theory, the study investigated the institutional research environment, leadership, governance and research support, individual research capability, institutional enablers and operational conditions, research engagement, and research productivity. A theory-informed exploratory sequential mixed methods design was employed. Qualitative data were gathered through interviews and focus group discussions with selected faculty members and administrators, while quantitative data were collected using validated survey instruments. The data were analyzed using descriptive statistics, correlation analysis, multiple regression, exploratory factor analysis, and structural equation modeling. The findings indicated that the university demonstrated a generally high level of research culture across the major dimensions examined. Significant relationships were identified among institutional structures, faculty capability, research engagement, and research productivity. The structural equation model further showed that institutional and individual factors significantly influenced research engagement and productivity. However, funding limitations, workload pressures, and infrastructure gaps remained major challenges. The integrated findings served as the basis for the development of an Evidence-Based Institutional Research Culture Framework intended to guide policy reform, faculty development, institutional support, and sustained research productivity in higher education institutions.

Keywords: Research Culture, Institutional Research Environment, Research Engagement, Research Productivity, Structural Equation Modeling, Evidence-Based Framework, Higher Education Institutions, State Universities And Colleges

1. Introduction

Background

Research has become a central function of higher education institutions because it supports knowledge production, innovation, evidence-based governance, and community development. In Philippine State Universities and Colleges (SUCs), research is undertaken alongside instruction and extension as part of the institutions' interconnected academic mandates. However, effective research performance depends not only on formal mandates but also on institutional policies, leadership, funding, infrastructure, mentoring, faculty competence, and opportunities for collaboration. Recent evidence indicates that a supportive institutional culture and sustained faculty engagement are necessary for translating research expectations into credible publications, funded projects, and socially relevant outcomes (Elechicon & Paris, 2026; Owan et al., 2024).

Rationale

Strengthening institutional research culture is particularly important as the Commission on Higher Education advances a research-driven, innovative, and globally connected higher education system. The CHED A.C.H.I.E.V.E. Agenda toward 2030 emphasizes research and innovation aligned with the Sustainable Development Goals, institutional capability building, research collaboration, evidence-based governance, and the translation of research into policy and community benefits (Commission on Higher Education [CHED], 2026). Nevertheless, faculty members in many Philippine higher education institutions continue to experience time constraints, limited research exposure, inadequate institutional assistance, publication pressure, and uneven access to funding and infrastructure. Research self-efficacy, institutional support, incentives, collaboration, and faculty development must therefore be addressed collectively rather than through isolated interventions (Pentang & Domingo, 2024; Rogayan & Corpuz, 2022).

Research Gap

Previous Philippine studies have commonly measured research productivity through publication counts, citations, faculty participation, or perceived research competence. Although these studies have identified significant barriers and enabling factors, they have generally examined institutional support, leadership, faculty capability, research engagement, and productivity separately or through predominantly descriptive approaches. Limited research has integrated these institutional, operational, and individual dimensions within a unified model and empirically tested their structural relationships in a regional, multicampus state university. This study addresses the gap by using an exploratory sequential mixed methods design and structural equation modeling to develop an evidence-based institutional research culture framework responsive to the conditions of Surigao del Norte State University.

Theoretical Framework

This study is anchored in Schein's Organizational Culture Theory, which explains organizational culture through three interconnected levels: artifacts, espoused values, and basic underlying assumptions. In this study, institutional policies, governance structures, and research support systems represent artifacts; leadership priorities and research goals reflect espoused values; and faculty competence, motivation, and research beliefs represent underlying assumptions. These cultural dimensions are expected to influence research engagement, which subsequently affects research productivity. The theory therefore provides the basis for examining how institutional and individual factors interact in shaping a sustainable research culture within the university (Schein, 2010).

Conceptual Framework

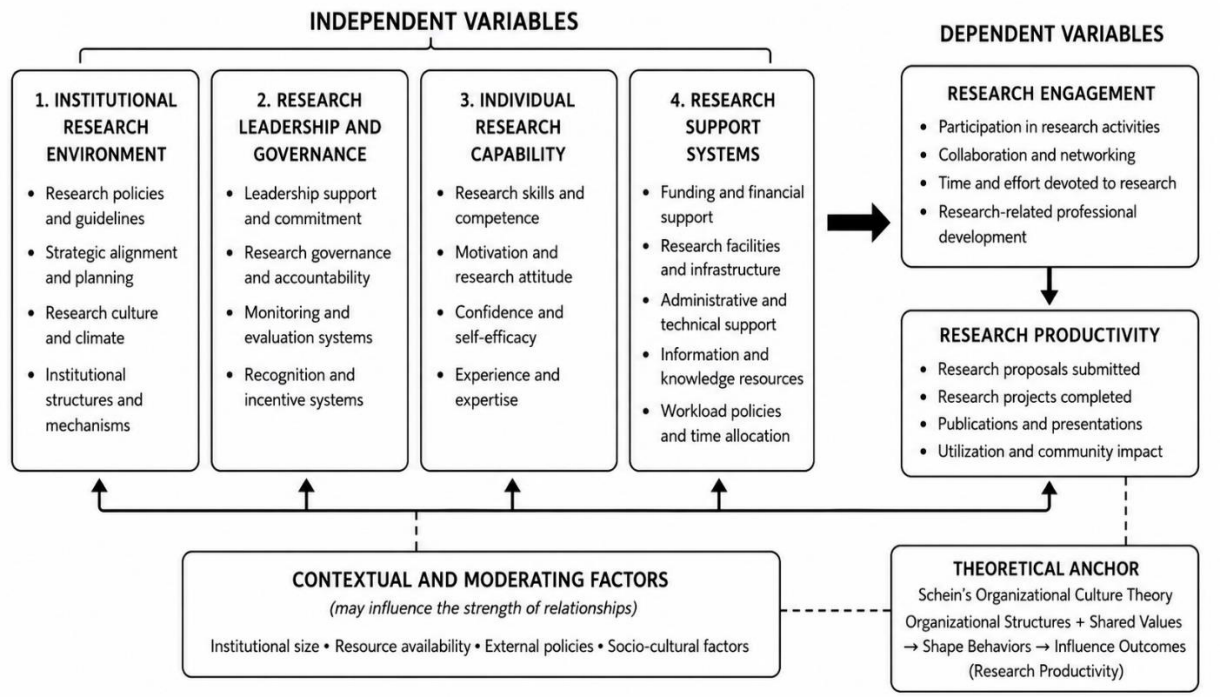

Figure 1. Conceptual Framework of the Study

Figure 1 illustrates how the institutional research environment, research leadership and governance, individual research capability, and research support systems influence faculty research engagement and, subsequently, research productivity. Research engagement serves as the behavioral pathway through which institutional and individual conditions are translated into outputs such as proposals, completed projects, publications, presentations, and community impact. The relationships may also be shaped by contextual and moderating factors, including institutional size, resource availability, external policies, and socio-cultural conditions. The framework is anchored in Schein's Organizational Culture Theory, which explains how organizational structures and shared values shape behavior and institutional outcomes.

Aim of the Study

This study aimed to examine the institutional and individual factors that shape research culture at Surigao del Norte State University and to develop an evidence-based institutional research culture framework for strengthening faculty research engagement and productivity.

Statement of the Problem

This study sought to answer the following questions:

1. What is the current state of research culture in the university in terms of:
   1.1 institutional research environment;
   1.2 research leadership, governance, and research support;
   1.3 individual research capability; and
   1.4 institutional enablers and operational conditions?
2. What factors facilitate or hinder the development of a strong research culture among faculty members?
3. Which institutional practices, resources, and leadership behaviors significantly influence research engagement and productivity?

4. What gaps exist between the current research culture and the desired level aligned with institutional and national goals?
5. What are the structural relationships among institutional research environment, leadership, governance and research support, individual research capability, institutional enablers and operational conditions, research engagement, and research productivity?
6. Based on the findings, what evidence-based institutional research culture framework may be developed to strengthen research engagement and productivity in the university?

2. Literature Review

Research culture in higher education is increasingly understood as an institutional system rather than the simple accumulation of faculty publications. It is shaped by the interaction of research policies, leadership priorities, administrative processes, mentoring, collaboration, funding, infrastructure, and workload arrangements. Evidence indicates that institutional support does not automatically produce research outputs; its influence is strengthened when it creates a collaborative culture that enables faculty members to participate consistently in research. Owan et al. (2024), for example, found that collaboration and institutional culture mediated the relationships between institutional support, mentorship, and research productivity. Similarly, Weis et al. (2024) showed that organizational structures, research planning, training, mentorship, and protected research time collectively determine whether faculty members can develop and sustain research capacity. These findings support the present study's treatment of the institutional research environment, leadership and governance, and operational support systems as interconnected components of research culture.

Individual research capability is equally important because institutional resources must be translated into actual faculty engagement. Research self-efficacy, methodological competence, publication confidence, motivation, and prior research exposure influence whether faculty members initiate projects, collaborate, present findings, and publish scholarly work. In the Philippine context, Pentang and Domingo (2024) found that research self-efficacy significantly predicted several dimensions of faculty research productivity, while limited exposure, time constraints, insufficient institutional support, and publication pressure restricted scholarly performance. Recent evidence from Philippine State Universities and Colleges further shows that research is embedded within faculty members' simultaneous responsibilities for instruction and extension. Heavy teaching loads, administrative duties, bureaucratic procedures, limited mentoring, and uneven infrastructure can therefore weaken sustained research engagement even when formal policies and performance expectations are present (Elechicon & Paris, 2026). These findings reinforce the inclusion of individual research capability and research engagement as essential mechanisms in the present framework.

Although recent studies have established that institutional culture, support systems, collaboration, workload, and faculty capability influence research productivity, these factors are often examined separately or through descriptive and correlational designs. Limited research has integrated institutional research environment, leadership and governance, individual capability, institutional enablers, research engagement, and research productivity within a single empirically tested framework, particularly in a regional, multicampus Philippine state university. The present study addresses this gap by using an exploratory sequential mixed methods design to contextualize the research culture of Surigao del Norte State University and Structural Equation Modeling to test the relationships among its institutional, individual, behavioral, and productivity dimensions. This integrated approach provides the empirical basis for developing an evidence-based institutional research culture framework rather than relying solely on generalized recommendations.

Research culture is also influenced by the broader organizational characteristics and management strategies of universities. Kienast (2023) synthesized evidence showing that institutional governance, organizational structures, management practices, and shared cultural expectations jointly affect academics' opportunities and willingness to collaborate. Research collaboration is therefore not merely an individual choice but an outcome shaped by how universities distribute authority, establish incentives, communicate research priorities, and organize academic

work. This perspective supports the present study's inclusion of institutional research environment and research leadership and governance as interconnected predictors of research engagement and productivity. It also reinforces the assumption that a strong research culture requires alignment between formal institutional structures and the everyday practices experienced by faculty members.

Collaboration and professional interaction further serve as mechanisms through which institutional support is converted into research outputs. Gilmour (2024) found that universities seeking to strengthen research collaboration must address workload pressure, access to research and funding processes, organizational culture, and opportunities for researchers to exchange knowledge. The study emphasized that collaboration is strengthened when institutions provide both formal support and relational spaces where academics can develop joint projects and share expertise. Similarly, Fussy (2024) reported that cultivating research culture requires sustained institutional commitment, supportive leadership, mentorship, adequate resources, and recognition of research activities. These findings are directly relevant to the present study because they explain why research engagement is positioned as the behavioral pathway connecting institutional conditions and individual capability with measurable research productivity.

Evidence from resource-constrained higher education systems also demonstrates that research productivity is weakened when institutional expectations are not matched by practical support. Kadikilo et al. (2024) identified insufficient funding, heavy teaching and administrative workloads, inadequate infrastructure, limited research skills, weak mentoring, and restrictive institutional procedures as major barriers to academic research productivity. These constraints resemble the dimensions examined in the present study, particularly institutional enablers and operational conditions, faculty research capability, workload support, and access to research resources. The convergence of these findings suggests that improving research productivity requires an integrated institutional response rather than isolated training activities. Accordingly, the present study examines how institutional structures, leadership, faculty capability, operational support, and research engagement function together within a unified structural model.

3. Methodology

This study employed a theory-informed exploratory sequential mixed methods design. The qualitative phase was conducted first through semi-structured interviews and focus group discussions with purposively selected faculty members and administrators of Surigao del Norte State University. This phase explored participants' experiences, institutional conditions, and perceived factors that facilitated or hindered research engagement. The emerging themes were used to refine the study constructs and develop the quantitative survey indicators.

The quantitative phase involved faculty members and administrators from the Main, Mainit, Malimono, and Del Carmen campuses. Stratified random sampling was used to ensure proportional faculty representation across campuses, while management respondents were selected based on their institutional roles and involvement in research governance. Two validated instruments were administered: the Faculty Research Culture Survey and the Management Research Culture Assessment. The instruments measured institutional research environment, leadership, governance and research support, individual research capability, institutional enablers and operational conditions, research engagement, research productivity, and perceived gaps between current and desired research conditions. The questionnaires underwent expert validation and pilot testing before full administration.

Quantitative data were analyzed using means, standard deviations, independent-samples and paired-samples *t*-tests, Pearson correlation, multiple regression, exploratory factor analysis, reliability and validity testing, and Structural Equation Modeling. Qualitative responses were examined through thematic analysis and were integrated with the quantitative findings during interpretation and framework development. Ethical approval, informed consent, voluntary participation, confidentiality, anonymity, and secure data management were observed throughout the study.

4. Results and Discussion

Qualitative Findings

Table 1. Qualitative Themes on Institutional Factors Supporting Faculty Research Engagement

Major Theme	Key Codes	Representative Participant Statements	Interpretation
Institutional Recognition and Incentives	Recognition of research outputs; financial incentives; awards and promotion; motivation through acknowledgement	*"Recognition and incentives encourage faculty members to become more involved in research." "Faculty researchers should be recognized for their accomplishments."*	Institutional recognition strengthened motivation by communicating that research contributions were valued. Incentives, awards, and professional recognition encouraged faculty members to initiate and complete research activities.
Research Funding and Resource Support	Availability of research funds; access to facilities; digital resources; technical assistance; logistical support	*"Funding is necessary because conducting research requires financial resources." "Faculty members need access to research facilities and technical support."*	Adequate funding and accessible research resources enabled faculty members to conduct, complete, and disseminate research. Limited resources constrained participation despite faculty interest.
Workload Support and Protected Research Time	Teaching-load reduction; workload adjustment; research time allocation; balancing institutional responsibilities	*"Faculty members need enough time to conduct research." "Heavy teaching loads make it difficult to focus on research."*	Faculty engagement was facilitated when workload arrangements provided sufficient time for research. Excessive teaching and administrative responsibilities reduced sustained participation.
Research Capability Development	Research training; methodological competence; proposal development; data analysis; publication preparation	*"Training helps faculty members become more confident in conducting research." "More workshops on research methods and publication are needed."*	Continuing research training enhanced faculty competence, confidence, and readiness to prepare proposals, analyze data, and produce publishable outputs.
Mentoring and Collaborative Support	Faculty mentoring; peer assistance; research teams; interdisciplinary collaboration; knowledge sharing	*"Experienced researchers should mentor faculty members who are still developing their research skills." "Collaboration makes research work easier and more manageable."*	Mentoring and collaboration reduced uncertainty and provided practical assistance. Collegial relationships created a supportive scholarly environment and strengthened sustained engagement.
Supportive Leadership and Governance	Leadership encouragement; accessibility of administrators; clear direction; policy support;	*"Support from leaders motivates faculty members to participate in research." "Administrators should provide clear direction and consistent support."*	Supportive and visible leadership reinforced research as an institutional priority. Faculty participation increased when leaders communicated

	accountability		expectations, provided guidance, and facilitated access to institutional support.
Efficient and Transparent Administrative Processes	Clear research procedures; timely approval; transparent funding processes; equitable distribution of opportunities	*"Research procedures should be clear and easy to follow." "Funding and opportunities should be distributed fairly."*	Transparent and efficient procedures increased faculty trust and reduced administrative barriers. Complicated or delayed processes discouraged participation and weakened confidence in institutional research systems.
Research Collaboration and Dissemination Opportunities	Research networks; conference participation; institutional partnerships; publication opportunities; dissemination support	*"Faculty members should be given opportunities to present and publish their studies." "Research collaboration expands knowledge and professional networks."*	Opportunities for collaboration and dissemination enhanced faculty visibility, professional growth, and connection with wider scholarly communities. These experiences encouraged continued research participation.

Table 1 shows that faculty research engagement was influenced by both institutional and individual support mechanisms. Recognition, incentives, funding, workload adjustment, training, mentoring, leadership support, transparent procedures, and opportunities for collaboration and dissemination emerged as the main themes. These findings indicate that faculty participation in research improves when adequate resources, protected time, professional development, supportive leadership, and clear administrative systems are available. Conversely, limited funding, heavy workloads, and inefficient procedures may reduce sustained research involvement.

Table 2. Qualitative Themes on Leadership Practices Influencing Faculty Research Engagement

Major Theme	**Key Codes**	**Representative Participant Statements**	**Interpretation**
Supportive Leadership Practices	Encouragement and follow-up; motivation; clear communication	*"Encouragement from time to time mag follow up na mag submit" (DCF4). "Leaders who motivate sustained faculty research engagement" (CCF5). "Clear communication in submitting proposals" (MMF1).*	Faculty members associated sustained research engagement with leaders who regularly encouraged, reminded, and guided them in completing research activities and submitting proposals.
Approachable and Accessible Leadership	Approachability; friendliness; open communication; guidance	*"Approachable in-charge" (DCF2). "Approachable and friendly leaders" (MMF3). "Open communication" (CCF8). "Leaders should guide and support researchers" (CCF6).*	Approachable leaders created an environment in which faculty members felt comfortable raising concerns, requesting assistance, and seeking guidance during the research process.
Fairness and Transparency	Transparent procedures; clear communication; openness; responsiveness to concerns	*"Transparency and clear processes in submitting papers" (CCF2). "Transparent communication" (MCF6). "Fair and open environment" (CCF6).*	Transparent policies and communication strengthened institutional trust. Faculty engagement improved when research procedures, expectations, and decisions were communicated clearly and implemented fairly.
Fair Workload	Equal access to funding;	*"Equal access to funding" (CCF3).*	Faculty members emphasized that

and Resource Distribution	equitable workload; reduced teaching preparation; adequate resources	*"Fair workload distribution" (CCF8). "Resource inadequacy when faculty overloaded" (MCF4). "Minimizing the number of preparations" (MCF5).*	leadership support should include equitable funding and manageable workloads. Excessive teaching responsibilities and unequal access to resources limited research participation.
Training and Conference Support	Research workshops; professional development; conference participation; external funding linkages	*"Holding training and workshops" (MMF1). "Sending faculty to international conferences" (MMF2). "Connect people with external funding agencies" (CCF3).*	Leadership support for training, conferences, and external funding strengthened faculty capability, scholarly exposure, and opportunities for collaboration and publication.
Mentorship-Oriented Leadership	Research mentoring; professional guidance; inspiration; continuing support	*"Mentorship-oriented leadership" (MCF3). "Providing mentorship among us who needs guidance" (MCF6). "Leaders guide and inspire researchers" (CCF6).*	Mentorship-oriented leadership helped less-experienced faculty members develop research confidence and competence. Guidance from leaders and experienced researchers supported continuous participation and professional growth.

Note. Participant quotations were retained from the qualitative responses, with minor grammatical adjustments where necessary for readability.

Table 2 indicates that faculty research engagement was strengthened by supportive, approachable, fair, and mentorship-oriented leadership. Participants particularly valued regular encouragement, transparent procedures, equitable workload and resource allocation, research training, conference participation, and access to mentoring. These findings show that leadership influences research engagement not only through policy and supervision but also through communication, trust, guidance, and practical institutional support.

Table 3. Current State of Research Culture in the University According to Faculty

Dimension	Mean	Standard Deviation	Verbal Description
Institutional Research Environment	3.48	0.50	Very High
Research Leadership and Governance	3.39	0.51	Very High
Individual Research Capability	3.24	0.62	High
Research Support System	3.21	0.59	High
Grand Mean	**3.31**	**0.47**	**Very High**

The results in Table 3 show that the university's overall research culture was rated **Very High** (*M* = 3.31, *SD* = 0.47). The institutional research environment obtained the highest mean, followed by research leadership and governance. Individual research capability and the research support system were rated **High**, indicating that these dimensions were generally established but still required further strengthening.

Table 4. Facilitating and Hindering Factors Affecting the Development of a Strong Research Culture Among Faculty

Facilitating and Hindering Factor	Mean	Standard Deviation	Verbal Description
Faculty possess the necessary research competence to produce quality and publishable outputs.	3.33	0.68	Strongly Influential
Institutional research funding is sufficient to support faculty research activities.	3.32	0.68	Strongly Influential
Leadership effectively adjusts faculty workload to provide adequate time for research.	3.32	0.69	Strongly Influential
Teaching workload demands limit faculty engagement in research activities.	3.29	0.68	Strongly Influential
Access to research infrastructure and digital resources adequately supports faculty research.	3.29	0.65	Strongly Influential
Incentive and reward systems effectively motivate faculty to engage in research activities.	3.22	0.71	Moderately Influential
Technical and statistical support services are readily available and accessible to faculty.	3.15	0.77	Moderately Influential
Overall Mean	**3.27**	**0.56**	**Strongly Influential**

Scale: 3.26–4.00 = Strongly Influential; 2.51–3.25 = Moderately Influential; 1.76–2.50 = Slightly Influential; 1.00–1.75 = Not Influential.

The overall mean of **3.27 in Table 4** indicates that the identified facilitating and hindering factors strongly influenced the university's research culture. Faculty research competence was the most influential factor, followed by institutional funding and effective workload adjustment. Conversely, teaching workload was identified as a major constraint. Technical and statistical support received the lowest mean, suggesting the need to improve the accessibility of specialized research assistance.

Table 5. Current Institutional Practices, Resources, and Leadership Behaviors According to Faculty

Institutional Practice, Resource, or Leadership Behavior	Mean	Standard Deviation	Verbal Description
Incentive systems reward high-quality research outputs.	3.17	0.69	High
Leadership decisions support research workload allocation.	3.29	0.64	Very High
Leaders are accountable for research outcomes.	3.21	0.64	High
Access to internal research funding is adequate.	3.03	0.73	High
Administrative processes for research approval are efficient.	3.17	0.72	High
Overall Mean	**3.17**	**0.54**	**High**

Scale: 3.26–4.00 = Very High; 2.51–3.25 = High; 1.76–2.50 = Moderate; 1.00–1.75 = Low.

The overall mean of **3.17** in Table 5 indicates that faculty perceived the university's institutional practices, resources, and leadership behaviors as highly supportive of research. Leadership support for research workload allocation received the highest rating, while access to internal research funding obtained the lowest mean. This suggests that leadership mechanisms were generally established, but funding access, incentives, and administrative processes still required improvement to strengthen research engagement and productivity.

Table 6. Gap Analysis Between the Current and Desired Research Culture According to Faculty

Indicator	Current Mean	Current SD	Desired Mean	Desired SD	*t*-Value	*p*-Value	Interpretation
Research funding levels adequately support faculty research.	2.49	0.938	3.34	0.730	-8.85	< .001	Significant gap
Research performance indicators are embedded in institutional evaluation systems.	2.68	0.877	3.42	0.665	-8.80	< .001	Significant gap
Leaders provide adequate workload support for research.	2.59	0.923	3.43	0.722	-8.38	< .001	Significant gap
Faculty research competence meets institutional expectations.	2.60	0.847	3.35	0.696	-8.00	< .001	Significant gap
Faculty confidence in proposal and publication preparation is adequate.	2.53	0.895	3.33	0.719	-8.21	< .001	Significant gap
Administrative processes for research approval are efficient.	2.56	0.915	3.38	0.659	-8.64	< .001	Significant gap
Research infrastructure and technical support meet faculty needs.	2.54	0.926	3.35	0.696	-8.26	< .001	Significant gap
Overall Mean	**2.57**	**0.809**	**3.37**	**0.635**	**-9.54**	**< .001**	**Significant gap**

The results in Table 6 reveal statistically significant differences between the current and desired research culture across all indicators. The overall current mean of **2.57** was substantially lower than the desired mean of **3.37**, $t = -9.54$, $p < .001$. The findings indicate that faculty expected stronger research funding, workload support, research capability development, administrative efficiency, infrastructure, technical assistance, and integration of research performance indicators into institutional evaluation systems.

Table 7. Structural Relationships Among the Research Culture Variables

Structural Path	Standardized β	*t*-Value	*p*-Value	Interpretation
Institutional Research Environment → Research Engagement and Productivity	.152	2.03	.045	Significant
Leadership, Governance and Research Support → Research Engagement and Productivity	.241	3.18	.002	Significant
Individual Research Capability → Research Engagement and Productivity	.392	4.97	< .001	Significant
Institutional Enablers and Operational Conditions → Research Engagement and Productivity	.311	4.15	< .001	Significant

The results in Table 7 show that all four dimensions of research culture significantly predicted research engagement and productivity. Individual Research Capability produced the strongest effect ($\beta = .392$, $p < .001$), indicating that faculty members' research competence, confidence, motivation, and experience are central to their sustained participation and scholarly output. This finding is consistent with Pentang and Domingo (2024), who reported that research self-efficacy significantly influenced several indicators of faculty research productivity. It also supports Frantz et al. (2022), who emphasized that institutional research productivity depends partly on developing faculty competencies in research methodology, statistical analysis, scientific writing, and publication. Thus, institutional investments are more likely to generate measurable outputs when faculty members possess the capability to transform available opportunities into proposals, completed studies, presentations, and publications.

Institutional Enablers and Operational Conditions had the second strongest effect on research engagement and productivity (β = .311, $p < .001$). This result demonstrates that faculty capability must be supported by adequate funding, research facilities, protected time, technical assistance, and efficient administrative processes. Fussy (2024) similarly found that the cultivation of research culture in higher education requires sustained institutional commitment, including resource provision, mentoring, supportive leadership, recognition, and opportunities for professional development. Frantz et al. (2022) also identified research management infrastructure, financial support, publication assistance, incentives, workshops, and dedicated research resources as important mechanisms for strengthening institutional research productivity. The finding therefore suggests that training faculty members without addressing their operational constraints may produce only limited or short-term improvements.

Leadership, Governance and Research Support also significantly predicted research engagement and productivity (β = .241, $p = .002$). Although its effect was weaker than those of individual capability and operational enablers, the result confirms that leadership priorities, accountability systems, workload decisions, incentives, and monitoring practices influence whether research becomes embedded in faculty work. Fussy (2024) observed that research-oriented leadership is necessary for communicating institutional priorities, mobilizing resources, recognizing faculty contributions, and sustaining participation in research. Similarly, Fadhel et al. (2024) argued that institutional research culture should be deliberately developed, monitored, and evaluated through indicators that capture collaboration, researcher development, access to funding, recognition, openness, and mutual support. These studies reinforce the need for university leaders to move beyond formal policy adoption toward consistent implementation and measurable institutional support.

Institutional Research Environment had the smallest but still significant effect (β = .152, $p = .045$). This suggests that documented policies, research agendas, strategic alignment, and institutional structures provide an essential foundation, but their influence on productivity is comparatively limited unless they are translated into accessible support and active faculty participation. Frantz et al. (2022) concluded that research policies and institutional initiatives are most effective when combined with research capacity building, appropriate management infrastructure, publication support, and performance monitoring. The overall structural model explained 49.1% of the variance in research engagement and productivity, indicating that the four dimensions provide substantial explanatory value while also suggesting that other factors—such as disciplinary differences, personal circumstances, external collaboration, and access to research networks—may contribute to the remaining variance. Collectively, the findings support an integrated approach in which institutional policies, leadership, operational support, and individual capability function together rather than as separate research development initiatives.

Table 8. Proposed Evidence-Based Programs for Strengthening the University's Research Culture

Proposed Program	Objective	Key Activities	Timeline	Key Performance Indicators
Research Capability Development Program	To strengthen faculty competence in research methodology, proposal preparation, data analysis, and publication.	Conduct research training at foundational, intermediate, and advanced levels; organize proposal-writing clinics, grant seminars, publication workshops, research boot camps, and writing retreats; provide access to statistical and digital research tools.	**Year 1:** Training rollout; **Years 2–3:** Capability enhancement and increased outputs; **Years 4–5:** Sustained productivity	Number of training activities; percentage of faculty trained; proposals submitted; peer-reviewed publications; funded research projects
Institutional Policy	To strengthen the institutional research	Review and revise research policies;	**Year 1:** Policy review and revision; **Years 2–3:**	Approved research policies; percentage of

Proposed Program	Objective	Key Activities	Timeline	Key Performance Indicators
Enhancement Plan	environment, governance, workload arrangements, incentives, and policy implementation.	establish performance-based incentives; provide protected research time; integrate research indicators into institutional planning; implement monitoring dashboards and evaluation systems.	Implementation and monitoring; **Years 4–5:** Institutionalization and continuous improvement	faculty receiving research workload adjustments; incentives granted; integration of research indicators into planning documents; improvement in institutional research performance
Research Mentorship and Collaboration Model	To develop a collaborative research culture through structured mentoring, interdisciplinary engagement, and knowledge sharing.	Establish mentor–mentee pairings; form disciplinary and interdisciplinary research clusters; conduct colloquia and collaboration forums; support joint studies and co-authorship; recognize and incentivize research mentors.	**Year 1:** Establishment of mentorship structures; **Years 2–3:** Active collaboration and output generation; **Years 4–5:** Sustained research networks and partnerships	Mentor–mentee pairings; collaborative projects; co-authored publications; participation in research forums; interdisciplinary research outputs

The proposed framework in Table 8 translates the findings into three complementary programs. Faculty capability is strengthened through research training, institutional barriers are addressed through policy and operational reforms, and sustained engagement is promoted through mentoring and collaboration. Together, these interventions provide an integrated mechanism for improving research engagement and productivity.

5. Implications of the Results and Findings

The findings have important theoretical implications for understanding research culture as an integrated organizational system. The significant effects of institutional research environment, leadership and governance, individual research capability, and operational support are consistent with Schein's Organizational Culture Theory, which explains how organizational structures, expressed priorities, and shared assumptions shape institutional behavior. The results also align with Owan et al. (2024), who found that institutional culture and research collaboration mediated the effects of mentorship and institutional support on academic research productivity. This suggests that policies, leadership structures, and resources do not operate independently; rather, they influence productivity through the research practices, relationships, and behaviors developed within the institution.

At the institutional level, the results imply that established policies and leadership mechanisms must be supported by accessible and consistently implemented research systems. The identified deficiencies in funding, protected research time, infrastructure, administrative efficiency, and technical assistance correspond with the findings of Weis et al. (2024), who reported that research capacity depends on coordinated institutional planning, training, mentorship, infrastructure, and dedicated time for research. Similarly, Elechicon and Paris (2026) found that faculty members in Philippine State Universities and Colleges often undertake research alongside demanding teaching, administrative, and extension responsibilities, creating tensions that restrict sustained scholarly engagement. The university should therefore embed research support within budgeting, workload allocation, faculty development, infrastructure planning, and performance management rather than treating research activities as supplementary responsibilities.

The policy and managerial implications are particularly evident in the finding that individual research capability was the strongest predictor of research engagement and productivity. This result supports Pentang and Domingo's

(2024) finding that research self-efficacy significantly predicts faculty publications, research presentations, and bibliometric performance. Faculty development should therefore be differentiated according to researchers' competence, experience, confidence, and publication readiness. However, capability-building should not be limited to short-term training because evidence shows that mentorship, institutional support, collaboration, funding, and a supportive organizational culture jointly influence research productivity (Owan et al., 2024; Weis et al., 2024). The proposed framework consequently provides a basis for integrating research training, mentoring, internal grants, workload protection, publication assistance, incentives, and performance monitoring into a coordinated institutional policy.

The findings also have implications for institutional benchmarking and future research. Since the structural model explained research productivity through interconnected institutional and individual factors, the validated constructs may be tested in other State Universities and Colleges to determine whether similar relationships occur across different campuses, disciplines, and resource conditions. The context-specific pressures identified by Elechicon and Paris (2026) indicate that research culture may vary according to teaching responsibilities, administrative arrangements, disciplinary requirements, and access to facilities. Longitudinal and multi-institutional studies should therefore examine whether sustained changes in funding, mentoring, workload policies, faculty capability, and institutional support produce measurable improvements in research engagement and productivity. Such studies would strengthen the empirical basis for developing context-responsive research policies across Philippine higher education institutions.

6. Conclusion and Recommendations

The study concludes that Surigao del Norte State University has established a generally strong research culture, particularly in terms of its institutional research environment, leadership, governance, and research support. However, significant gaps remain in faculty research capability, funding availability, protected research time, infrastructure, administrative efficiency, and technical support. The structural model further confirmed that institutional research environment, leadership and governance, individual research capability, and institutional enablers and operational conditions significantly influence research engagement and productivity, with individual research capability emerging as the strongest predictor. These findings indicate that sustainable research productivity cannot be achieved through policies or institutional structures alone. It requires the coordinated interaction of supportive leadership, accessible resources, efficient operational systems, and competent and actively engaged faculty members. The Evidence-Based Institutional Research Culture Framework therefore provides a context-responsive model for strengthening research participation, productivity, and institutional research performance.

The university should institutionalize the proposed Evidence-Based Institutional Research Culture Framework through a coordinated implementation plan that prioritizes faculty capability development, protected research time, increased funding access, improved incentives, strengthened research infrastructure, and more efficient administrative and technical support. Regular training in research design, data analysis, proposal preparation, grant acquisition, and scholarly publication should be provided, supported by structured mentoring and interdisciplinary research clusters. Research workload policies should be reviewed to ensure that faculty members are given adequate time to undertake and complete research, while incentive and recognition systems should be aligned with the quality, relevance, utilization, and societal impact of research outputs. The university should also establish a monitoring and evaluation system using measurable indicators for research engagement, productivity, collaboration, publication, funding, and community impact. Future studies may replicate and validate the framework in other State Universities and Colleges, employ longitudinal designs to assess changes over time, and examine discipline-specific or campus-level variations in research culture.

Declarations

Credit Authorship Contribution Statement

Froilan Jay E. Guiral: Conceptualization, Methodology, Investigation, Data Curation, Formal Analysis, Validation, Visualization, Writing—Original Draft, Writing—Review and Editing, and Project Administration. The author approved the final version of the manuscript and accepts responsibility for the integrity and accuracy of the work.

Ethical Approval

The study was reviewed and approved. All research procedures involving human participants were conducted in accordance with applicable institutional ethical guidelines and accepted principles for social science research. Participants' identities and institutional records were protected through anonymization, restricted data access, and secure data storage.

Informed Consent

Informed consent was obtained from all faculty members and administrators who participated in the interviews, focus group discussions, and survey. Participation was voluntary, and respondents were informed of the study's purpose, procedures, potential risks and benefits, confidentiality safeguards, and their right to decline participation or withdraw without penalty.

Declaration of Competing Interest

The author declares that there are no known financial, professional, institutional, or personal competing interests that could have influenced the conduct, analysis, interpretation, or reporting of this study.

Funding Statement

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Data Availability Statement

The data supporting the findings of this study may be obtained from the corresponding author upon reasonable request and subject to institutional approval, ethical restrictions, and the protection of participant confidentiality. The complete dataset is not publicly available because it contains information collected from university faculty members and administrators.

Declaration on the Use of Generative Artificial Intelligence

Generative artificial intelligence tools were not used to generate research data, perform statistical analyses, interpret the findings, or make scholarly decisions. AI-assisted tool was used for language refinement or editorial support was employed under the author's supervision, and the author reviewed and accepts full responsibility for the final manuscript.

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