

Perceived competence and faculty needs in the key result areas for academic promotions in a Philippine state university

Rose Mary L. Almacén¹, Adrian P. Ybañez², Ryan O. Tayco³, Benjamin S. Villagonzalo Jr.⁴,
Dawn Iris Calibo-Senit⁵

¹Office of the Vice President for Student Affairs, Cebu Technological University, Cebu City, Philippines

²Institute for Molecular Genetics, Parasitology and Vector-borne Diseases, Cebu Technological University, Cebu City, Philippines

³College of Tourism and Hospitality Management, Negros Oriental State University, Dumaguete City, Philippines

⁴College of Business Administration, Negros Oriental State University, Dumaguete City, Philippines

⁵Office of Research Services, Siquijor State College, Larena, Siquijor, Philippines

Article Info

Article history:

Received Mar 19, 2026

Revised Aug 21, 2026

Accepted Aug 31, 2026

Keywords:

Faculty competence
Faculty development
Faculty promotion
Higher education
State university

ABSTRACT

Faculty promotion in Philippine state universities depends on performance in instruction, research, extension, and professional development, yet institutions often lack evidence on whether faculty are equally prepared across these domains. This study examined perceived competence and developmental needs among regular faculty members at a large, multi-campus Philippine state university. Using a descriptive-analytical cross-sectional design, all 824 regular faculty members were invited to an online survey; 346 responded, and 300 valid responses were analyzed. Descriptive statistics, association tests with false discovery rate adjustment, and thematic analysis of open-ended responses were used. Not applicable responses were excluded from domain score denominators to avoid penalizing faculty for non-applicable promotion indicators. Findings showed uneven competence across the four domains. Instruction remained the strongest area, while research was the most constrained domain, with low levels of indexed publications, scientific presentations, and intellectual property outputs. Qualitative themes highlighted unequal access to opportunities, research support needs, workload pressures, funding constraints, and field-alignment concerns. Promotion-oriented faculty development should therefore prioritize structured research mentoring, protected time, support for converting outputs, and equitable access mechanisms across campuses.

This is an open access article under the [CC BY-SA](#) license.



Corresponding Author:

Adrian P. Ybañez

Institute for Molecular Genetics, Parasitology and Vector-borne Diseases, Cebu Technological University
Cebu City 6000, Philippines

Email: dr.adrianpybanez@gmail.com

1. INTRODUCTION

Faculty development is central to academic quality, institutional sustainability, and academic promotion in higher education. In Philippine state universities, promotion is anchored on evidence of performance in instruction, research, extension, and professional development. These expectations link individual career progression with institutional quality assurance and require support systems that help faculty meet promotion criteria in realistic and equitable ways [1]–[3].

A competency-based faculty development perspective guided the study. In this view, promotion readiness depends on the development of role-related competencies, the institutional conditions that support their use, and the outputs through which competence is recognized. Instruction, research, extension, and professional development are therefore treated as related domains shaped by mentoring, workload, funding,

access to opportunities, and academic career stage [4]–[7]. The framework is summarized visually as shown in Figure 1.

Philippine evidence indicates that heavy workloads, uneven access to development opportunities, limited research mentoring, inadequate funding, and publication barriers frequently constrain faculty development. These constraints are important because current promotion systems increasingly reward outputs such as indexed publications, conference presentations, intellectual property, and externally visible scholarly work. Faculty may therefore possess advanced credentials but still struggle to convert training and qualifications into promotable outputs when the institutional research environment is weak [8]–[20].

This issue is especially relevant in large multi-campus state universities, where faculty work across campuses with different locations, resources, student populations, and opportunity structures. Centralized training systems may not fully address campus-level differences in access, mentoring, and research support. Institution-level evidence is therefore needed to determine whether faculty are equally prepared across promotion domains and what support mechanisms are most necessary.

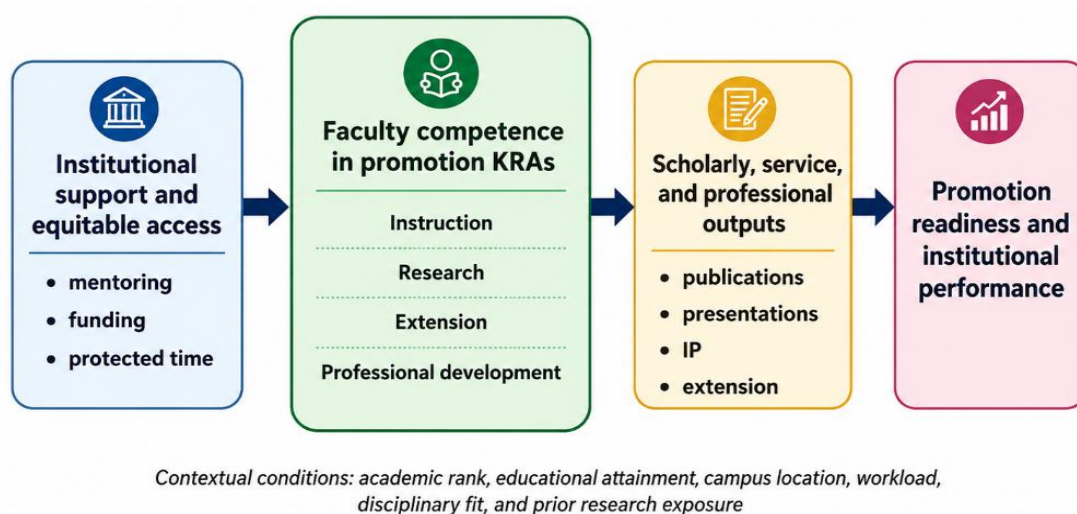


Figure 1. Conceptual framework of promotion-oriented faculty development

The novelty of this study lies in its integrated assessment of perceived competence, scholarly output patterns, and promotion-related development needs within one large multi-campus Philippine state university. Previous Philippine studies often examine research productivity, faculty development participation, extension engagement, or publication challenges separately. By linking the four promotion-related key result areas to faculty characteristics, scholarly outputs, and open-ended faculty concerns, this study provides a practical, theory-informed basis for promotion-oriented faculty development [8]–[22]. The study examined regular faculty members' perceived competence and development needs in instruction, research, extension, and professional development. Specifically, it asked:

- What are the characteristics and scholarly outputs of regular faculty members in the university?
- How do faculty members perceive their competence in the four key result areas for academic promotion?
- How are competence levels associated with faculty characteristics and selected scholarly outputs?
- What concerns and recommendations do faculty members raise regarding conditions that affect promotion readiness?

2. METHOD

2.1. Research design and participants

The study used a descriptive-analytical cross-sectional design and an institution-wide online survey. At the time of data collection, the university had 824 regular faculty members, all of whom were invited through an official memorandum. A total of 346 faculty members responded, yielding a 42.0% response rate, and 300 responses were retained after excluding cases with more than 10% missing data and multivariate outliers identified through Mahalanobis distance [23]–[26].

Because all regular faculty members were invited, the study was treated as a census attempt rather than a rank- or department-restricted sample. The final analytic sample included faculty from rural, suburban, and urban campuses and from varied academic ranks, educational attainment levels, and lengths of service. Representativeness by discipline could not be fully assessed because many respondents declined to disclose their field of expertise, and voluntary participation may have introduced self-selection and nonresponse bias. Cebu Technological University is a level 4 state university with more than 20 campuses distributed across Cebu. This multi-campus structure provided an appropriate setting for examining faculty development needs under varied institutional and geographic conditions. The design supports institution-level description and association testing but does not establish causal relationships among competence, productivity, rank, and development opportunities.

2.2. Research instrument

The questionnaire was anchored on the current Department of Budget and Management–Commission on Higher Education (DBM-CHED) promotion framework and related criteria for faculty in state universities and colleges. It included a faculty profile section, 33 perception-based items, and open-ended questions on faculty concerns and suggestions. The perception items covered instruction, research, extension, and professional development as promotion-related domains.

The response options were strongly agree, agree, disagree, strongly disagree, and not applicable. Scored responses were coded from 1 to 4 after reverse-coding need- or difficulty-oriented items so that higher scores consistently indicated stronger promotion-related competence or lower perceived development need. Not applicable responses were treated as structurally non-scored responses because they indicated that a specific promotion indicator did not apply to the respondent's role, field, or experience.

The instrument underwent face validation by three experts, including two specialists in educational measurement and psychometrics and one senior faculty administrator with experience in academic promotion processes. The full 33-item scale showed excellent internal consistency using listwise complete cases (Cronbach's $\alpha=0.940$). Reliability varied across domains, with high reliability for research ($\alpha=0.956$) and extension ($\alpha=0.876$), but lower reliability for instruction ($\alpha=0.360$) and professional development ($\alpha=0.545$), suggesting that these domains captured heterogeneous promotion-related indicators rather than a single, narrow construct.

2.3. Data collection and analysis

Completed responses were downloaded, screened, anonymized for analysis, and coded. Descriptive statistics summarized respondent characteristics, scholarly outputs, item-level responses, and domain competence levels. Under the scoring approach, domain scores were computed as the mean of applicable scored items only; not applicable responses were excluded from the denominator and reported separately where relevant.

Mean scores were interpreted as 1.00–1.80=poor, 1.81–2.60=developing, 2.61–3.40=proficient, and 3.41–4.00=advanced. Chi-square tests examined associations between categorical competence levels and selected faculty variables, and Cramér's V was used to interpret effect size. To reduce Type I error inflation, the Benjamini-Hochberg false discovery rate adjustment was applied within each analytical family, and interpretation emphasized adjusted significance, effect size, and convergence with qualitative evidence.

For the qualitative component, open-ended responses were analyzed inductively using thematic analysis [27]. Two independent coders applied a shared codebook developed through iterative review of the data, and responses could receive multiple thematic labels. Inter-coder reliability was assessed at the binary theme level; pooled agreement and Cohen's kappa were 96.19% and 0.786 for concerns/challenges and 95.65% and 0.697 for suggestions/recommendations, after which coder differences were reconciled to produce the harmonized theme set [28].

2.4. Ethical considerations

The study followed institutional ethical standards for voluntary survey research. Participants received an information sheet explaining the study purpose, procedures, voluntary participation, and confidentiality safeguards before accessing the online questionnaire. Electronic informed consent was obtained before submission; no personal identifying information is reported, and findings are presented only in aggregate form. Administrative clearance was obtained through university procedures before data collection. The study involved faculty perceptions and did not involve intervention, deception, or the collection of sensitive clinical information. The dataset used for analysis was handled confidentially, and any supplementary material should be anonymized before external sharing.

3. RESULTS AND DISCUSSION

3.1. Respondent profile and scholarly outputs

Most respondents came from campuses with 2,001 to 6,000 students and from suburban locations. Nearly 7 in 10 were instructors or assistant professors, while 42.7% had completed a doctoral degree, and 33.7% were at the doctoral level. The profile indicates a faculty body with substantial graduate training, although 18.7% reported that their educational qualifications were not vertically aligned with their teaching or research expertise, as shown in Table 1.

Scholarly output was weaker than formal qualification levels. Most respondents reported no Scopus/WoS-indexed publications as main or corresponding authors, no local or international scientific paper presentations, and no patents during the covered period. This pattern supports the interpretation that advanced credentials and seminar participation do not automatically translate into promotable research and innovation outputs without sustained mentoring, protected time, and institutional support [11]–[20].

Table 1. Selected profile and scholarly output indicators of respondents (n=300)

Variable	Category	n (%)
Campus size	2000 and below	46 (15.3)
	2001-6000	165 (55.0)
	6001 and above	89 (29.7)
Campus location	Rural	37 (12.3)
	Suburban	152 (50.7)
	Urban	111 (37.0)
Age	30 or less	34 (11.3)
	31–40	113 (37.7)
	41–50	98 (32.7)
	51 and above	55 (18.3)
Academic rank	Instructor	110 (36.7)
	Assistant professor	96 (32.0)
	Associate professor	85 (28.3)
	Professor	9 (3.0)
Highest educational attainment	College degree graduate	4 (1.3)
	Masteral level	17 (5.7)
	Masteral degree graduate	48 (16.0)
	Doctoral level	101 (33.7)
	Doctoral degree graduate	128 (42.7)
	Doctoral candidate	1 (0.3)
	Juris doctor/LLB	1 (0.3)
Vertical alignment	Yes	244 (81.3)
	No	56 (18.7)
Scopus/WoS main or corresponding author publications	1 to 2	39 (13.0)
	3 or more	10 (3.3)
	None	251 (83.7)
Local scientific paper presentations	1 to 2	55 (18.3)
	3 or more	22 (7.3)
	None	223 (74.3)
International scientific paper presentations	1 to 2	43 (14.3)
	3 or more	6 (2.0)
	None	251 (83.7)
Local conferences/seminars/workshops/industry immersion	10 or fewer	192 (64.0)
	11–20	26 (8.7)
	More than 20	11 (3.7)
	None	71 (23.7)
International conferences/seminars/workshops/industry immersion	Any international activity	102 (34.0)
	None	198 (66.0)
Utility models	1 to 2	39 (13.0)
	3 or more	31 (10.3)
	None	230 (76.7)
Patents	1 to 2	8 (2.7)
	3 or more	5 (1.7)
	None	287 (95.7)

3.2. Perceived competence across the key result areas

After excluding not applicable responses from domain score denominators, instruction remained the strongest domain, while research remained the most constrained area. Instruction had the highest proportion of faculty in the proficient range, whereas research had the largest proportion in the poor or developing ranges. The scoring provides a more role-sensitive estimate because respondents were not penalized for indicators that did not apply to their field or assignment.

The item-level pattern clarifies the competence profile. Faculty reported the strongest scores in class management, coordination with instructional heads, community service involvement, accreditation-related service, active professional membership, and seminar or workshop participation. The weakest indicators were mentoring needs in subject delivery, research outputs related to plant varieties, animal breeds, microbial strains, published designs, media service, external grants, additional qualification needs, and scientific paper presentation, as shown in Table 2.

Table 2. Strongest, weakest, and highest not applicable indicators by key result area

Domain	Strongest applicable indicator	Mean (applicable n)	Weakest applicable indicator	Mean (applicable n)	Highest not applicable item, n (%)
Instruction	S2: I have good management skills in handling my classes and students.	3.38 (n=299)	S1: I need mentoring and trainings in effectively teaching subject matters to my students.	1.87 (n=295)	S6: 17 (5.7)
Research	S11: I know how to process patents, utility models, and industrial design	2.28 (n=271)	S14: I have developed new plant varieties or animal breeds, or isolated new microbial strains that are propagated or reproduced.	1.88 (n=202)	S14: 98 (32.7)
Extension	S23: I have rendered service-oriented projects in the community, participated in including advocacy initiatives.	2.96 (n=281)	S26: I have rendered services through media, including newspapers, TV, or radio programs.	1.99 (n=239)	S26: 61 (20.3)
Professional development	S29: I have active memberships in relevant, recognized/registered professional organizations, learned/honor/scientific, or society [the maximum to earn points is at least four], wherein I am a committee member or officer.	2.84 (n=283)	S30: I still need to obtain additional educational qualifications (e.g., a master's or doctoral degree).	1.96 (n=283)	S32: 41 (13.7)

Note: higher means indicate stronger promotion-related competence or lower perceived development need after reverse-coding need- and difficulty-oriented items. Not applicable responses were excluded from item means.

The domain classifications show that research was poor or developing for 251 of 293 respondents with at least one applicable research item. Extension and professional development were also more constrained under the applicable-item scoring approach than under the earlier total-score approach, indicating that development needs are broader than those addressed by research alone. These findings still support the central conclusion that promotion readiness is uneven across key result areas, with research and output conversion as the main constraints, as shown in Table 3.

Table 3. Perceived competence levels after excluding not applicable responses from domain scoring (n=300)

Competence level	Instruction n (%)	Research n (%)	Extension n (%)	Professional development n (%)	Overall n (%)
Poor	0 (0.0)	87 (29.0)	31 (10.3)	46 (15.3)	20 (6.7)
Developing	61 (20.3)	164 (54.7)	140 (46.7)	149 (49.7)	192 (64.0)
Proficient	223 (74.3)	34 (11.3)	99 (33.0)	102 (34.0)	80 (26.7)
Advanced	16 (5.3)	8 (2.7)	23 (7.7)	3 (1.0)	8 (2.7)
Not scored	0 (0.0)	7 (2.3)	7 (2.3)	0 (0.0)	0 (0.0)

Note: domain scores were computed as the mean of applicable scored items only. Cutoffs were 1.00–1.80=poor, 1.81–2.60=developing, 2.61–3.40=proficient, and 3.41–4.00=advanced. Not scored indicates respondents who have no applicable items in that domain.

3.3. Statistical associations among competence areas and faculty characteristics

After Benjamini-Hochberg adjustment, most profile-output associations with competence levels were small and did not remain statistically robust. Professional development competence was retained through small associations with industrial designs and local scientific paper presentations. These results indicate that isolated p-values near 0.05 should not be overinterpreted, especially because several crosstab cells had small expected counts.

The most stable associations were found among the competence domains themselves. Research was moderately associated with extension, and extension was moderately associated with professional development. Research also showed a small-to-moderate association with professional development, while instruction showed a small association with extension, as shown in Table 4. These inter-domain associations suggest that promotion-related competence develops as a connected portfolio rather than as isolated

activities. Faculty who are better positioned to produce research, participate in extension, and engage in professional development may benefit from overlapping resources, networks, mentoring, and institutional visibility. However, the cross-sectional design precludes causal inference, and the results should be interpreted as evidence of clustering rather than directionality.

Table 4. Statistically robust Chi-square associations after false discovery rate adjustment

Key result area	Variable/paired area	χ^2	df	p	FDR-adjusted p	Cramér's V	Effect-size interpretation
Professional development	Industrial designs	25.585	6	<0.001	0.005	0.207	Small
Professional development	Local scientific paper presentation	20.088	6	0.003	0.027	0.183	Small
Inter-KRA association	Research×extension	197.530	9	<0.001	<0.001	0.478	Moderate
Inter-KRA association	Extension×professional development	127.356	9	<0.001	<0.001	0.381	Moderate
Inter-KRA association	Research×professional development	77.664	9	<0.001	<0.001	0.297	Small-to-moderate
Inter-KRA association	Instruction×extension	14.932	6	0.021	0.031	0.160	Small

Note: Benjamini-Hochberg false discovery rate adjustment was applied to the analytical family. Cramér's V values around 0.10, 0.30, and 0.50 were interpreted as small, moderate, and large effects, respectively. Several crosstabs had small expected counts; results should therefore be interpreted cautiously.

3.4. Faculty concerns, suggestions, and implications for promotion-oriented development

The qualitative findings complemented the quantitative results by identifying the institutional conditions that shape promotion readiness. The most frequent concerns were access, opportunities, training availability, and equity; research and publication challenges; budget and funding constraints; workload, designations, and time constraints; and field alignment or specialization issues. The most frequent recommendations were general training and capacity-building, research support and mentoring, structured implementation and monitoring, budget support, and field-specific development, as shown in Table 5.

Table 5. Harmonized emerging themes for open-ended responses (n=300)

Open-ended area	Rank	Harmonized theme	n (%)
Q1. Concerns, problems, and challenges	1	Access/opportunities/training availability/equity	92 (30.7)
	2	Research/publication-related challenges	76 (25.3)
	3	Budget/funding constraints	56 (18.7)
	4	Workload/designations/time constraints	47 (15.7)
	5	Field alignment/specialization/industry-technology fit	33 (11.0)
	6	Implementation/monitoring/evaluation gaps	27 (9.0)
	7	Leadership/governance/organizational issues	21 (7.0)
	8	Program design/needs/adequacy issues	20 (6.7)
	9	Mentoring/orientation/support	19 (6.3)
	10	Communication/policy/guideline issues	18 (6.0)
	11	Graduate studies support	12 (4.0)
	12	Facilities/resources/infrastructure	9 (3.0)
	13	Well-being/work-life balance	7 (2.3)
Q2. Suggestions and recommendations	1	General training/capacity-building opportunities	91 (30.3)
	2	Research support/mentoring/collaboration	65 (21.7)
	3	Implementation/monitoring/structured planning/sustainability	44 (14.7)
	4	Budget/funding/financial support	43 (14.3)
	5	Field-specific/needs-based/aligned development	40 (13.3)
	6	Equal opportunity/inclusive access/fair participation	27 (9.0)
	7	Faculty participation/planning/individual development	22 (7.3)
	8	Benchmarking/international exposure/industry immersion	17 (5.7)
	9	Workload/designation reduction	16 (5.3)
	10	Policy/guideline/manual revision	13 (4.3)
	11	Facilities/resources/instructional support	13 (4.3)
	12	Graduate studies support	12 (4.0)
	13	Communication/orientation/dissemination	12 (4.0)
	14	Hiring additional faculty/staff	10 (3.3)
	15	Instructional balance/innovation	9 (3.0)
	16	Incentives/rewards/recognition	8 (2.7)
	17	Leadership/governance/fiscal management	5 (1.7)

Note: responses were multi-coded; percentages do not sum to 100%.

These themes show that the credential-output gap is not simply an individual competence problem. Many faculty members had advanced qualifications, but low publication, presentation, and intellectual property outputs suggest barriers after degree completion, including limited post-degree mentoring, teaching-heavy assignments, publication costs, and weak output-conversion pipelines. The finding may also reflect differences in doctoral program research intensity and the need for stronger institutional research culture after graduate training [11]–[20], [29], [30]. The multi-campus setting adds an equity dimension to faculty development. When opportunities are distributed through centralized or competitive mechanisms, faculty in smaller, distant, or less-resourced campuses may have fewer chances to access mentors, funds, facilities, and external networks. Promotion-oriented faculty development should therefore include transparent access criteria, decentralized support, campus-level monitoring, and targeted assistance for faculty with fewer prior outputs [9], [21], [22], [31], [32].

The practical implication is that faculty development should move from stand-alone seminars toward a sequenced support system. Research mentoring, writing groups, proposal development clinics, publication assistance, workload-sensitive research time, and field-aligned development opportunities should be organized as an output-conversion pathway. Such a system would be more consistent with a promotion framework that evaluates evidence of instruction, scholarship, extension, and professional growth rather than attendance alone. The study has limitations that should guide interpretation. Competence was self-reported and may differ from objective performance records, although the convergence of survey and qualitative findings supports the broad pattern. The 42.0% response rate, voluntary online participation, one-university setting, missing disciplinary detail, and multiple small-cell crosstabs limit generalizability and statistical certainty; future studies may combine perception surveys with verified institutional performance records and intervention-based evaluations across multiple state universities.

4. CONCLUSION

Promotion readiness at this multi-campus Philippine state university was shaped by uneven competence across the key result areas, with instruction remaining the strongest domain and research the most constrained after not applicable responses were excluded from scoring. The coexistence of high doctoral attainment, frequent development activity, and low levels of indexed publications, scientific presentations, patents, and related outputs indicates a credential-output gap that cannot be addressed by generic training alone. Faculty concerns and recommendations point to structural needs for research mentoring, protected time, funding support, field-aligned opportunities, and transparent access mechanisms across campuses. Strengthening these conditions can help universities align promotion policy with developmental support while improving research productivity, teaching quality, extension responsiveness, and institutional performance.

FUNDING INFORMATION

The authors received partial funding for the study from the Futures Thinking Fund, sourced from the Philippine General Appropriations Act (GAA) funds of Cebu Technological University.

AUTHOR CONTRIBUTIONS STATEMENT

This journal uses the Contributor Roles Taxonomy (CRediT) to recognize individual author contributions, reduce authorship disputes, and facilitate collaboration.

Name of Author	C	M	So	Va	Fo	I	R	D	O	E	Vi	Su	P	Fu
Rose Mary L. Almacén	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Adrian P. Ybañez	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Ryan O. Tayco				✓	✓		✓	✓	✓	✓	✓			
Benjamin S. Villagonzalo Jr.				✓	✓		✓	✓	✓	✓	✓			
Dawn Iris Calibo-Senit				✓	✓		✓	✓	✓	✓	✓			

C : **C**onceptualization

M : **M**ethodology

So : **S**oftware

Va : **V**alidation

Fo : **F**ormal analysis

I : **I**nterpretation

R : **R**esources

D : **D**ata Curation

O : **O**riginal Draft

E : **E**diting

Vi : **V**isualization

Su : **S**upervision

P : **P**roject administration

Fu : **F**unding acquisition

CONFLICT OF INTEREST STATEMENT

The authors declare no conflict of interest. No financial or personal relationship influenced the conduct, analysis, or reporting of this study. The authors affirm that the manuscript was prepared independently and in accordance with journal requirements.

INFORMED CONSENT

Informed consent was obtained from all individuals who participated in this study. Participants received information about the study purpose, procedures, voluntary participation, and confidentiality safeguards before completing the online questionnaire. Only aggregate findings are reported.

ETHICAL APPROVAL

The study adhered to relevant national regulations of the Philippine Health Research Ethics Board and to institutional policies, in line with the principles of the Helsinki Declaration. The Local Research Ethics Committee of Cebu Technological University approved the study. Participation was voluntary, and no personally identifying information was reported in the manuscript.

DATA AVAILABILITY

The data that support the findings of this study are available from the corresponding author, [APY], upon reasonable request. Access may be granted for reasonable scholarly purposes, subject to institutional policies and confidentiality safeguards. Requests should be directed to the corresponding author.

REFERENCES

- [1] Commission on Higher Education, "CMO No. 46, series of 2012 - Policy-standard to enhance quality assurance (QA) in Philippine higher education through an outcomes-based and typology-based QA," 2012. [Online]. Available: <https://www.pacu.org.ph/wordpress/wp-content/uploads/2017/03/CMO-No.46-s2012.pdf>
- [2] H. Zacher, C. W. Rudolph, T. Todorovic, and D. Ammann, "Academic career development: a review and research agenda," *Journal of Vocational Behavior*, vol. 110, pp. 357–373, Feb. 2019, doi: 10.1016/j.jvb.2018.08.006.
- [3] C. M. D. Toquero, "'Real-world': preservice teachers' research competence and research difficulties in action research," *Journal of Applied Research in Higher Education*, vol. 13, no. 1, pp. 126–148, Jan. 2021, doi: 10.1108/JARHE-03-2019-0060.
- [4] M. Kohan, T. Changiz, and N. Yamani, "A systematic review of faculty development programs based on the Harden teacher's role framework model," *BMC Medical Education*, vol. 23, no. 1, p. 910, Nov. 2023, doi: 10.1186/s12909-023-04863-4.
- [5] M. L. Robertson, J. Cofrancesco, and R. B. Levine, "Transforming individuals and institutions through competency-based faculty development," *Frontiers in Medicine*, vol. 12, Jun. 2025, doi: 10.3389/fmed.2025.1621376.
- [6] R. M. M. Cotta *et al.*, "The effectiveness of faculty development programs for training university professors in the health area: a systematic review and meta-analysis," *BMC Medical Education*, vol. 24, no. 1, p. 768, Jul. 2024, doi: 10.1186/s12909-024-05735-1.
- [7] Y. Steinert, "Faculty development: From rubies to oak," *Medical Teacher*, vol. 42, no. 4, pp. 429–435, Apr. 2020, doi: 10.1080/0142159X.2019.1688769.
- [8] J. Chavez, "Exploring Faculty and Research Development Strategies among Top-Ranked VISMINS Universities in the Asian University Rankings," *Journal of Education and Academic Settings*, vol. 2, no. 1, pp. 1–24, Aug. 2025, doi: 10.62596/j34e0m77.
- [9] A. M. Lomenario, "Faculty Development Program of Selected Private Higher Education Institutions in the Province of Albay: An Assessment," *JPAIR Multidisciplinary Research*, vol. 60, no. 1, pp. 1–25, Mar. 2025, doi: 10.7719/jpair.v60i1.927.
- [10] N. B. Tulo and J. Lee, "Continuing Professional Development of the Teacher Education Faculty among Philippine State Universities and Colleges," *International Journal of Learning, Teaching and Educational Research*, vol. 21, no. 6, pp. 324–344, Jun. 2022, doi: 10.26803/ijlter.21.6.19.
- [11] C. C. Launio, F. K. D. Samuel, A. Banez, M. C. Talastas, L. Sito, and K. B. Dela Cruz, "Motivating Factors and Challenges of Faculty Members in a State University in the Philippines in Publishing Journal Articles," *Journal of Scientometric Research*, vol. 13, no. 3, pp. 866–876, Dec. 2024, doi: 10.5530/jscires.20041215.
- [12] J. Quiño-Justol and F. Gomez, "Developing a Framework for Addressing Research Competence and Challenges Among Local College Faculty: Toward a Targeted Training Program," *Journal of Interdisciplinary Perspectives*, vol. 3, no. 3, 2025, doi: 10.69569/jip.2025.006.
- [13] I. Esguerra, B. J. Villena, and A. Viagedor, "Understanding the training needs of faculty members in producing research outputs: Input to faculty development program," *CTU Journal of Innovation and Sustainable Development*, vol. 17, no. 1, pp. 124–134, Mar. 2025, doi: 10.22144/ctujoisd.2025.028.
- [14] A. C. Marasigan *et al.*, "'Dress like the Global North and eat like the Global South': why do faculty contributions to university research productivity matter?" *Frontiers in Education*, vol. 10, Jun. 2025, doi: 10.3389/educ.2025.1576981.
- [15] R. A. Niez, "Faculty experiences in publishing in Scopus-indexed journals: Challenges and strategies among higher education institutions in the Philippines," *Edelweiss Applied Science and Technology*, vol. 8, no. 6, pp. 4101–4115, Nov. 2024, doi: 10.55214/25768484.v8i6.2900.
- [16] D. Tayaban and R. O'Leary, "Striving to publish in international journals: A case study of a small university in rural Philippines," *Journal of Public Affairs Education*, vol. 28, no. 4, pp. 407–421, Oct. 2022, doi: 10.1080/15236803.2022.2093602.
- [17] W. C. Pascua, "Motivational Factors Influencing Research Productivity among Higher Education Faculty," *Asian Research Journal of Arts & Social Sciences*, vol. 23, no. 5, pp. 14–25, Apr. 2025, doi: 10.9734/arjass/2025/v23i5677.

- [18] G. G. Padillo, R. P. Manguilimotan, R. G. Capuno, and R. C. Espina, "Professional Development Activities and Teacher Performance," *International Journal of Education and Practice*, vol. 9, no. 3, pp. 497–506, 2021, doi: 10.18488/journal.61.2021.93.497.506.
- [19] J. T. Pentang and J. G. Domingo, "Research Self-Efficacy and Productivity of Select Faculty Members: Inferences for Faculty Development Plan," *European Journal of Educational Research*, vol. 13, no. 4, pp. 1693–1709, Oct. 2024, doi: 10.12973/eujer.13.4.1693.
- [20] R. Vecaldo, J. E. Asuncion, and M. Ulla, "From Writing to Presenting and Publishing Research Articles: Experiences of Philippine Education Faculty-Researchers," *Eurasian Journal of Educational Research*, vol. 19, no. 81, pp. 147–164, May 2019, doi: 10.14689/ejer.2019.81.9.
- [21] W. B. Jaron and R. S. Malaga, "Faculty engagement in community extension programs: Examining personal factors, institutional support, and stakeholder collaboration in a state university," *Edelweiss Applied Science and Technology*, vol. 9, no. 6, pp. 1233–1248, Jun. 2025, doi: 10.55214/25768484.v9i6.8098.
- [22] D. A. Corpuz, M. J. C. Time, and B. T. Afalla, "Empowering the community through the extension services of a teacher education institution in the Philippines," *Cogent Education*, vol. 9, no. 1, Dec. 2022, doi: 10.1080/2331186X.2022.2149225.
- [23] D. Lakens, "Sample size justification," *Collabra: Psychology*, vol. 8, no. 1, pp. 1–28, Mar. 2022, doi: 10.1525/collabra.33267.
- [24] D. L. Langkamp, A. Lehman, and S. Lemeshow, "Techniques for Handling Missing Data in Secondary Analyses of Large Surveys," *Academic Pediatrics*, vol. 10, no. 3, pp. 205–210, May 2010, doi: 10.1016/j.acap.2010.01.005.
- [25] P. Madley-Dowd, R. Hughes, K. Tilling, and J. Heron, "The proportion of missing data should not be used to guide decisions on multiple imputation," *Journal of Clinical Epidemiology*, vol. 110, pp. 63–73, Jun. 2019, doi: 10.1016/j.jclinepi.2019.02.016.
- [26] R. De Maesschalck, D. Jouan-Rimbaud, and D. L. Massart, "The Mahalanobis distance," *Chemometrics and Intelligent Laboratory Systems*, vol. 50, no. 1, pp. 1–18, Jan. 2000, doi: 10.1016/S0169-7439(99)00047-7.
- [27] V. Braun and V. Clarke, "Using thematic analysis in psychology," *Qualitative Research in Psychology*, vol. 3, no. 2, pp. 77–101, Jan. 2006, doi: 10.1191/1478088706qp063oa.
- [28] M. L. McHugh, "Interrater reliability: the kappa statistic," *Biochemia Medica*, vol. 22, no. 3, pp. 276–282, 2012, doi: 10.11613/BM.2012.031.
- [29] E. P. Balanquit, M. A. P. Ladia, and N. R. Nool, "The Influence of Faculty Members' Educational Attainment on the Performance in the Licensure Examination for Teachers (LET) among State Universities and Colleges in the Philippines," *Journal of Curriculum and Teaching*, vol. 12, no. 1, p. 247, Feb. 2023, doi: 10.5430/jct.v12n1p247.
- [30] A. P. David, Z. Q. Reyes, P. A. Miranda, M. J. N. Nalipay, I. V. Ancho, and M. M. Roxas, "Graduate Teacher Education in the Philippines: Observations and Prospects," *The Normal Lights*, vol. 14, no. 2, pp. 248–271, Dec. 2020, doi: 10.56278/tnl.v14i2.1660.
- [31] J. Hill, E. Haddad, S. Braet, E. Rush, and D. Bratcher, "Improving Academic Promotion Success via Implementation of Targeted Preparation Strategies and Coaching Processes," *Academic Medicine*, vol. 100, no. 1, pp. 28–32, Jan. 2025, doi: 10.1097/ACM.0000000000005906.
- [32] Z. Sabagh and M. Moshtari, "The unintended consequences of a quantitative, centralized faculty promotion system: empirical evidence from a developing country," *Higher Education*, vol. 90, no. 6, pp. 1547–1569, Dec. 2025, doi: 10.1007/s10734-024-01391-y.

BIOGRAPHIES OF AUTHORS



Rose Mary L. Almacén    is the Campus Director of Cebu Technological University (CTU) Danao Campus (since 2015), and the former vice-president for student affairs of the CTU (2022–2025). As a senior academic administrator and researcher whose core interests encompass Education 4.0, management, construction, science, and applied innovation, she advances indicator systems and pedagogical frameworks to strengthen institutional preparedness, regulatory compliance, and student achievement. Her scholarly contributions include peer-reviewed publications in internationally indexed journals with over 60 citations. At the practice-and-policy level, she has served in various leadership capacities, including Chairperson for Research and Development and Chairperson for Math and Science. She currently leads projects that integrate quality management systems and innovative utility models—such as sustainable material production from agricultural by-products—into the university's strategic growth, while spearheading community-based extension programs focused on livelihood, teacher training, and mathematics education. She can be contacted at rosemary.almacen@ctu.edu.ph.



Adrian P. Ybáñez    is a distinguished Philippine researcher, professor VI at Cebu Technological University, and former Vice-President for Research and Development, leading the Institute for Molecular Genetics, Parasitology and Vector-borne Diseases (IMGPVBD). His expertise spans veterinary medicine, parasitology, microbiology, vector-borne diseases, molecular biology, phylogenetics, epidemiology, public health, and the social sciences. He earned his Ph.D. in Veterinary Sciences from Obihiro University of Agriculture and Veterinary Medicine in Japan and has accumulated more than 1,800 Google Scholar citations. Recognized among leading Asian and Philippine researchers in the medical and health sciences, he advances work on animal health, infectious diseases, and interdisciplinary approaches. He can be contacted at email: dr.adrianpybanez@gmail.com.



Ryan O. Tayco    is the Campus Director of Negros Oriental State University (NORSU) Main Campuses I and II and Pamplona Campus, and associate professor V in Hospitality and Tourism Management. An active researcher, he has published numerous articles in hospitality, sustainability, and higher education, building a growing citation impact across regional and international platforms. His leadership extends nationally as vice president of PHILARM Negros Island Region (NIR), Board Director of PAGE NIR, and Chair of the Resource Generation Committee of Kalambuan Inc., complemented by membership in the National Research Council of the Philippines (NRCP) and other professional organizations. He can be contacted at email: ryantayco@norsu.edu.ph.



Benjamin S. Villagonzalo Jr.    is the university director for research and development, formerly the dean of the College of Business Administration at Negros Oriental State University. He also serves as an associate professor IV and graduate school professorial lecturer. A dynamic educator with more than 15 years of teaching experience, he is recognized for his expertise in lesson planning, public speaking, and fostering student growth through innovative and adaptable teaching methods. He holds a Doctor of Philosophy in Business Administration (Major in Business Management) from the University of Negros Occidental–Recoletos, a Doctor of Business Administration from Saint Paul University Dumaguete, a master's in Business Administration from Foundation University, and a bachelor's in Business Administration major in Management from Silliman University. With a strong commitment to academic excellence, research leadership, and public service, he continues to contribute to education and institutional development, inspiring students and colleagues alike. He can be contacted at benjamin.villagonzalo@norsu.edu.ph.



Dawn Iris Calibo-Senit    is the research director and associate professor of Information Technology at Siquijor State College. She holds a Doctor of Information Technology degree from the Technological Institute of the Philippines–Manila, along with a master's degree in Public Administration and a master's degree in Science Teaching major in Computer Science, and has completed academic units toward a Ph.D. in Technological Management. Her scholarly work spans information theory, computer science, data mining, and systems development and design, with three copyrighted software systems registered with the Intellectual Property Office of the Philippines. Beyond her contributions to information technology research, she actively engages in interdisciplinary research integrating data-driven technologies with environmental and agricultural sustainability initiatives. She currently serves as program leader of the Siquijor Native Cattle Research Center (SiqCat), a research initiative funded by the Office of the Philippine Futures Thinking Society. She can be contacted at email: dawniriscalibo@gmail.com.