
Reflective Teaching, Self-Efficacy and Research Practices among CvSU Naic Faculty Members: Basis for Capability Enhancement Programs

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Abstract

This study investigates the interrelationships among reflective teaching, self-efficacy, and research practices among faculty members of Cavite State University Naic (CvSU Naic), with the goal of informing faculty development programs. Employing a mixed-methods design, the research integrates quantitative and qualitative data to analyze faculty perceptions and professional experiences. Findings reveal a significant positive correlation between reflective teaching and self-efficacy, both of which contribute to increased research engagement. Faculty members who regularly engage in reflective teaching exhibit higher self-efficacy, which in turn enhances scholarly productivity. Among the demographic variables analyzed, age significantly predicted self-efficacy, suggesting that confidence in teaching grows with experience; however, academic rank, employment status, and other factors showed no significant effects. These insights highlight the importance of institutional support systems—such as structured reflection and research mentorship—in fostering a culture of pedagogical innovation and scholarship. The study advocates for targeted faculty development initiatives that support continuous professional growth and excellence across all ranks. Future studies could adopt longitudinal and in-depth qualitative approaches to further explore the development of faculty self-efficacy and research involvement over time.

Keywords: Reflective Teaching, Self-Efficacy, Research Engagement, Faculty Development, Higher Education

1. Introduction

Reflective teaching is a fundamental approach that empowers educators to continuously refine their instructional methods and enhance student learning outcomes. In the ever-evolving field of education, professional growth is anchored in the ability to critically assess and evaluate one's teaching practices. Through systematic self-examination, teachers engage in a thoughtful and structured process that allows them to analyze their classroom strategies, management techniques, and overall pedagogical philosophy. This introspective approach fosters improvement, ensuring that instruction remains responsive to the diverse learning needs of students.

By incorporating reflective teaching into their professional routine, educators gain valuable insights into their strengths and areas requiring enhancement. It serves as an avenue to identify instructional methods that successfully facilitate student learning while pinpointing aspects that demand modification or refinement. Through self-reflection, teachers can evaluate their effectiveness in communication, classroom management, assessment strategies, and curriculum development. This process enables them to set precise educational objectives, tackle challenges proactively, and optimize learning experiences for their students.

Furthermore, examining reflective teaching in relation to self-efficacy and research practices provides valuable insights into effective teaching methodologies. Research plays a crucial role in shaping evidence-based instructional strategies, contributing to the overall professional growth of educators. By understanding how reflective practices influence teaching efficacy and the integration of research-based approaches, competency enhancement programs can be designed to strengthen educators' instructional capabilities. Such initiatives can promote meaningful engagement with research, fostering a culture of continuous learning and improvement in educational institutions.

One significant aspect of educational development involves the promotion of research-driven teaching practices. Encouraging educators to engage in research allows them to embrace evidence-based instruction, stay updated with recent educational findings, and apply innovative strategies in their classrooms. Research on educators' engagement in scholarly activities can shed light on both the facilitators and barriers to research involvement. Addressing these challenges through targeted competency development programs can cultivate a research-oriented mindset among teachers, equipping them with the necessary resources to effectively integrate scholarly findings into their teaching methodologies.

In the Philippines, the Commission on Higher Education (CHED) has emphasized the importance of research, innovation, and extension in higher education through CHED Memorandum Order No. 52, s. 2016. Additionally, the revised university vision (PHDR 047A-2023) states Cavite State University's commitment to becoming a globally recognized institution distinguished by excellence in character development, academic achievement, research, innovation, and sustainable community engagement. Recognizing the significance of these directives, researchers aim to investigate the research practices, reflective teaching, and self-efficacy of faculty members at Cavite State University Naic to align with these educational priorities.

The paper aims at responding to the pressing demand of developing the academic proficiencies of the faculty members of Cavite State University–Naic by determining the level of their reflective teaching, self-efficacy, and research practices. However, even though these two elements are essential to enhance instructional quality and productivity, there are many teachers who encounter difficulties in engaging with reflective pedagogy, lack the confidence to engage in research and do not have skills to engage in research as a result of constraints in time, a lack of training and inadequate institutional support. These deficiencies highlight the need for programs aimed at enhancing faculty capacity, thereby enabling faculty to better teach and contribute to the university's research agenda.

It seeks to contribute to the enhancement of educational quality by addressing teachers' diverse instructional needs, improving evidence-based teaching practices, increasing teacher self-efficacy, and fostering collaboration within the academic community. By integrating research findings into faculty development programs, institutions can equip educators with the necessary skills, knowledge, and support to continuously refine their teaching methodologies and positively impact student learning outcomes. The study's findings can support and advance the university's vision for academic excellence and innovation.

The primary goal of this research is to examine the perceived reflective teaching, self-efficacy, and research practices among faculty members of Cavite State University Naic. Specifically, the study aims to:

1. explore the relationship between faculty members' profiles and their reflective teaching, self-efficacy, and research practices.
2. determine any significant correlation between subscales of reflective teaching and faculty members' research engagement and self-efficacy.
3. examine the relationships between self-efficacy subscales and faculty members' research and reflective practices.
4. investigate significant differences in attained levels of reflective teaching, self-efficacy, and research practices among CvSU Naic faculty members.
5. develop a faculty development enrichment plan and curriculum improvement framework based on research findings to support CvSU Naic faculty members.

2. Conceptual Framework

The conceptual framework of the study is presented in Figure 1. The independent variables comprise demographic profiles (age, gender, academic rank, years of service) and professional mediating variables (reflective teaching and self-efficacy). Research engagement serves as the dependent variable. The framework suggests that reflective teaching enhances self-efficacy, which subsequently increases faculty research engagement. Additionally, institutional support mechanisms—such as training, mentorship, and collaborative research opportunities—act as external facilitators strengthening these relationships.

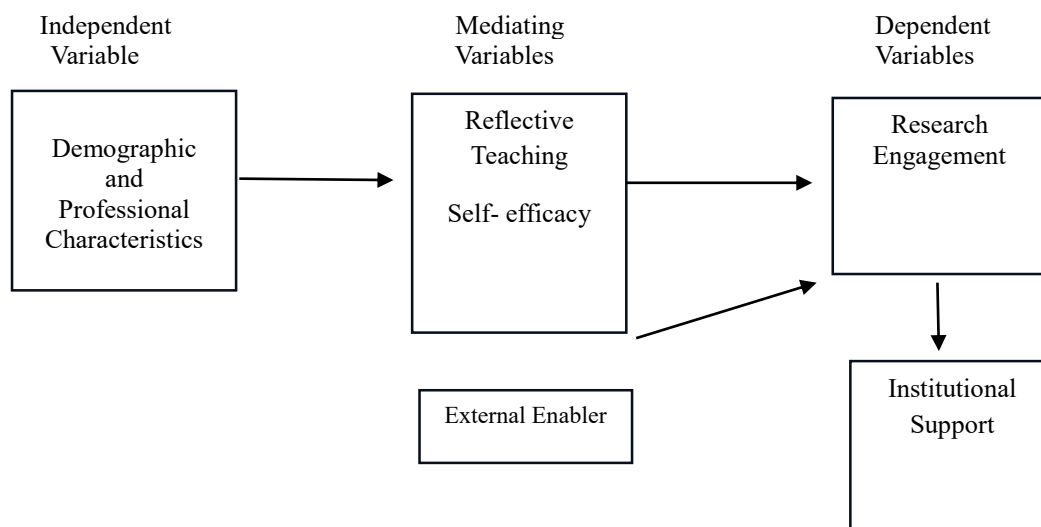


Figure 1: Conceptual Framework of the Study

3. Methods

3.1. Research Design

The study adopted a mixed-methods research approach, which involves the collection, analysis, and integration of both qualitative and quantitative data to provide a more comprehensive understanding of the issue (Tashakkori & Creswell, 2007). An exploratory sequential design was employed, starting with qualitative data collection to uncover in-depth perspectives, followed by quantitative analysis to validate and expand the findings. This methodological approach served as the foundation for designing relevant capability enhancement programs tailored to faculty development in teaching and research.

3.2. Respondent

The study included all 56 faculty members of Cavite State University Naic as respondents, employing complete enumeration. To uphold ethical standards, an information and consent letter was disseminated, outlining the purpose of the research and ensuring participants that their identities and individual responses would remain strictly confidential.

3.3. Instrument

An adapted questionnaire based on the work of Rahimi and Weisi (2018) was used to collect data. It consists of 29 items on reflective teaching, 24 items on self-efficacy, and 20 items on research practices. Respondents rated each item using a five-point Likert scale: for self-efficacy, responses range from “not confident at all” to “highly confident”; for reflective teaching, from “never” to “always”; and for research practices, from “not at all” to “to a great extent.” In addition, a researcher-developed qualitative interview guide was used to gather in-depth data. This guide underwent expert validation to ensure its relevance and clarity.

3.4. Research Procedure

The data from the study were gathered using documentation procedure. This could be made possible by considering the details from the instrumentation. Upon the approval of the final draft of the instruments by the experts, and approval of proposal the researchers wrote a letter from authorities for the approval of the conduct of the study, the researchers sent a letter to the target respondents for the conduct of the study. Then, the researchers facilitated survey questionnaire to the respondents of the study. Focus group discussion (FGD) and KII were also conducted. Finally, the collation and tabulation of data were made. The researchers collated, tallied code and tabulated all the information that was acquired from the respondents of the study then analyzed and interpreted the statistical results.

3.5. Statistical Treatment

Descriptive statistics such as frequency counts, ranks, median and percentages were utilized to describe the responses and summarize the data. (Objective 1). A multiple correlation was used to examine the relationship among the participants’ reflective practice, self-efficacy, and research practice. (Objectives 2, 3 and 4). A one-way analysis of variance (ANOVA) was used to examine the differences among attained level of reflective teaching, self- efficacy and research practices among the faculty members of CvSU Naic; (Objective 5). Thematic analysis was used for the qualitative part of the study.

4. Results and Discussion

This section presents the key findings of the study, providing an in-depth analysis of the data gathered. The results are interpreted in relation to the study’s objectives, supporting literature, and theoretical framework. Trends, relationships, and significant patterns emerging from the data are highlighted, offering insights into the implications of reflective teaching, self-efficacy, and research practices among CvSU Naic faculty members. Furthermore, discussions explore the relevance of these findings in shaping capability enhancement programs, ensuring that recommendations are grounded in empirical evidence.

4.1. Interpretation of Correlation Results

The correlation analysis examined the relationship between respondents' demographic and professional profiles and their reflective teaching, self-efficacy, and research practice. The findings indicate the following:

Table 1 shows that only age showed a significant positive correlation with self-efficacy, suggesting older faculty members develop greater confidence in their teaching abilities over time. No link was found between age and reflective teaching or research practice. Highest educational attainment, years in service, employment status, and academic rank had no significant influence on reflective teaching, self-efficacy, or research engagement. This implies that tenure, qualifications, and job security do not inherently drive these outcomes. The findings align with Bandura’s (1997) self-efficacy theory, where experience (reflected in age) enhances confidence. However, the lack of correlation with other factors suggests that institutional support, personal motivation, or cultural environment may play stronger roles in shaping faculty engagement than demographics alone.

4.2. Implications

- Institutions should leverage senior faculty’s self-efficacy for mentorship.
- Faculty development programs should focus on support systems (training, resources) rather than assuming rank or tenure ensures engagement.

This also means that while age bolsters confidence, effective teaching and research thrive on intentional support—not just years served, or titles held.

Table 1. Correlation Between Selected Demographic Variables and Reflective Teaching, Self-Efficacy, and Research Practice

Variable	Reflective Teaching (r)	Self-Efficacy (r)	Research Practice (r)
Age	.241 (.073)	.332* (.012)	.168 (.217)
Highest Educational Attainment	-.024 (.862)	-.038 (.779)	-.134 (.326)
Years in Service (n = 54)	.202 (.143)	.185 (.181)	.102 (.464)
Employment Status	-.034 (.802)	-.132 (.334)	-.187 (.168)
Academic Rank	.069 (.611)	.002 (.988)	-.028 (.835)

Note. Values are Pearson’s r coefficients. p values are in parentheses.

*Significant at $p < .05$

Table 2 presents correlation analysis, which shows statistically significant positive relationships between reflective teaching and both self-efficacy ($r = .721, p < .01$) and research practice ($r = .623, p < .01$). These strong correlations indicate that faculty members who engage in reflective teaching practices - such as critical self-assessment and analysis of teaching methods - tend to demonstrate higher levels of confidence in their instructional abilities and greater participation in research activities. The findings suggest that reflective teaching serves as a catalyst for professional development, simultaneously enhancing educators' self-efficacy while fostering a research-oriented mindset. This dual effect likely occurs as the analytical skills developed through teaching reflection translate naturally into scholarly inquiry. The results underscore the importance of incorporating reflective practices into faculty development programs, highlighting how structured self-evaluation, peer feedback mechanisms, and institutional support for teaching documentation can collectively contribute to both improved teaching confidence and increased research productivity. These insights position reflective teaching as a valuable strategy for holistic faculty growth, bridging the gap between pedagogical effectiveness and scholarly engagement.

The data confirm that intentional reflection transforms teaching practice into both greater self-assurance and research output—a virtuous cycle for faculty growth.

Table 2. Relationship Between Reflective Teaching, Self-Efficacy, and Research Practice Correlations

		Self-Efficacy	Research Practice
Reflective Teaching	Pearson Correlation	.721**	.623**
	Sig. (2-tailed)	.000	.000
	N	56	56

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed)

Table 3 reveals strong positive correlations between faculty self-efficacy and both reflective teaching ($r = .721, p < .001$) and research engagement ($r = .680, p < .001$). These robust relationships demonstrate that confident educators are significantly more likely to critically examine their teaching methods and actively pursue research. The findings suggest self-efficacy serves as a psychological engine driving professional growth - when faculty believe in their capabilities, they become more reflective practitioners and more prolific scholars.

For institutions, these results highlight three key opportunities: (1) implementing mentorship programs to build teaching confidence, (2) providing research training to strengthen scholarly self-efficacy, and (3) creating supportive environments that encourage pedagogical reflection alongside research activity.

Confidence is the bridge between teaching and research excellence. By nurturing faculty self-efficacy, institutions don't just develop better teachers or more productive researchers - they cultivate complete academics who continuously improve their practice while advancing their field.

Table 3. Relationship Between Self-Efficacy, Reflective Teaching, and Research Practice Correlations

		Reflective Teaching	Research Practice
Self-efficacy	Pearson Correlation	.721**	.680**
	Sig. (2-tailed)	.000	.000
	N	56	56

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

Table 4 on descriptive analysis revealed notable variations in faculty perceptions across five academic departments (ASD, FASD, ITD, MD, TED). The MD (Management Department) and TED (Teacher Education Department) consistently demonstrated higher mean scores across all three measured constructs:

- Reflective Teaching: MD and TED faculty reported more frequent engagement in critical self-assessment of teaching methods
- Self-Efficacy: These departments showed strongest confidence in teaching/research capabilities
- Research Practice: TED and MD displayed most active research engagement

Other departments (ASD, FASD, ITD) showed comparatively lower scores across these metrics, suggesting potential disciplinary differences in professional practices.

The consistent outperformance of MD and TED across all three measures suggests a virtuous cycle where reflective teaching, professional confidence, and research activity mutually reinforce one another. This pattern may reflect stronger cultures of professional development in these departments, where pedagogical reflection is both modeled and valued alongside research productivity. For other departments, targeted interventions building reflective practice could potentially initiate similar positive feedback loops between teaching confidence and scholarly work.

Table 4. Differences in Reflective Teaching, Self-Efficacy, and Research Practices Across Departments ANOVA

	Department	N	Mean	Std. Deviation
Reflective Teaching	ASD	14	3.9450	.59105
	FASD	9	3.5900	.53214
	ITD	11	3.8664	.71019
	MD	10	4.0730	.71464
	TED	12	3.9942	.55394
	Total	56	3.9059	.61985
Self-efficacy	ASD	14	4.2836	.35969
	FASD	9	4.0956	.45563
	ITD	11	4.0473	.53371
	MD	10	4.4060	.39781
	TED	12	4.4283	.39182
	Total	56	4.2598	.43914
Research Practice	ASD	14	3.5536	.75714
	FASD	9	3.4444	.61464
	ITD	11	3.6909	.74660
	MD	10	3.9000	.79373
	TED	12	4.0875	.72115
	Total	56	3.7393	.74399

The data in Table 5 shows no statistically significant differences ($p > 0.05$) in faculty members' reflective teaching, self-efficacy, or research practices across departments. While minor variations in mean scores existed—with FASD and ITD showing slightly lower trends in self-efficacy and research engagement—these disparities were not significant.

4.3. ANOVA Results

- Reflective Teaching: $F(4,51) = 0.842, p = 0.505$ (not significant)
- Self-Efficacy: $F(4,51) = 1.784, p = 0.146$ (not significant)
- Research Practice: $F(4,51) = 1.396, p = 0.249$ (not significant)

Key Implications:

- Unified Faculty Development: The absence of departmental differences supports institution-wide training programs for reflective teaching, confidence-building, and research skills, ensuring consistent professional growth.
- Preemptive Support for Lower-Scoring Departments: Though not significant, marginally lower scores in FASD/ITD suggest value in targeted mentorship or research incentives to prevent potential gaps.
- Research Culture Boost: Consistently moderate research scores across departments highlight a need for structural support (e.g., funding, reduced teaching loads, collaborative opportunities) to elevate scholarly output institutionally.

While faculty competencies transcend departmental boundaries at CvSU Naic, the uniformity in scores—particularly in research—reflects a shared opportunity. Rather than remediating disparities, the institution can proactively cultivate a culture where reflective teaching and self-efficacy naturally fuel research engagement, elevating all departments collectively.

Table 5. Difference in Reflective Teaching, Self-Efficacy, and Research Practices among the Faculty Members of Cvsu Naic Across Different Department

ANOVA		Sum of Squares	df	Mean Square	F	Sig.
Reflective Teaching	Between Groups	1.309	4	.327	.842	.505
	Within Groups	19.822	51	.389		
	Total	21.132	55			
Self-efficacy	Between Groups	1.302	4	.326	1.784	.146
	Within Groups	9.304	51	.182		
	Total	10.606	55			
Research Practice	Between Groups	3.004	4	.751	1.396	.249
	Within Groups	27.439	51	.538		
	Total	30.444	55			

While the descriptive statistics in Table 6 showed slightly higher means for females across all three variables, the independent samples t-tests indicate that these differences are not statistically significant. This means that the observed differences are likely due to random chance, not a true difference between male and female faculty.

Female faculty members scored higher than male faculty members in all three dimensions:

Reflective teaching (Female: 4.0167, Male: 3.7470)

Self-efficacy (Female: 4.3252, Male: 4.1661)

Research practice (Female: 3.8576, Male: 3.5696)

Independent samples t-tests revealed no statistically significant gender differences in:

- Reflective teaching ($p = 0.110$)
- Self-efficacy ($p = 0.185$)
- Research practice ($p = 0.156$)

While minor mean score variations existed (e.g., slightly higher research practice scores among female faculty), these differences were not significant:

1. Gender-Inclusive Development: Faculty training programs can maintain a unified structure for reflective teaching and research skills without gender-specific modifications.
2. Research Culture Enhancement: The trend of marginally higher research engagement among female faculty—though not significant—suggests potential value in promoting research mentorship for all faculty, particularly male colleagues.
3. Beyond Gender: The absence of significant differences redirects focuses toward other influential factors (e.g., institutional support, workload, career stage) that may shape teaching and research practices more substantially than gender.

Gender does not predetermine teaching reflection, confidence, or scholarly output at CvSU Naic. Instead of categorizing faculty by gender, the institution might achieve greater impact by fostering an equitable environment where all educators—regardless of gender—receive tailored support aligned with their individual needs and aspirations.

Table 6. Differences in Reflective Teaching, Self-Efficacy, and Research Practices Based on Sex Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower		Upper
Reflective Teaching	Equal variances assumed	.330	.568	-1.626	54	.110	-.26971	.16591	-.60234	.06291
	Equal variances not assumed			-1.613	46.191	.113	-.26971	.16718	-.60619	.06677
Self-efficacy	Equal variances assumed	1.706	.197	-1.343	54	.185	-.15906	.11842	-.39648	.07835
	Equal variances not assumed			-1.399	52.953	.168	-.15906	.11370	-.38712	.06899
Research Practice	Equal variances assumed	.000	.983	-1.439	54	.156	-.28801	.20015	-.68928	.11326
	Equal variances not assumed			-1.465	50.290	.149	-.28801	.19660	-.68285	.10682

To determine whether faculty members' age groups significantly affect their reflective teaching, self-efficacy, and research practices, a one-way ANOVA was conducted. Data result was presented in Table 7.

Descriptive Trends:

- Faculty aged 51 showed the highest mean scores in reflective teaching (M=4.17), self-efficacy (M=4.44), and research practice (M=3.84).
- The youngest group (21–30 years) scored lowest across all dimensions (M=3.30–3.87).
- Suggests a potential experiential advantage but no statistically significant age-based differences (ANOVA: all p-values > 0.05).

The analysis revealed notable descriptive trends in faculty practices across age groups, with faculty aged 51 and above demonstrating the highest mean scores in reflective teaching (M=4.17), self-efficacy (M=4.44), and research engagement (M=3.84), while the youngest cohort (21-30 years) showed the lowest scores across all dimensions. However, ANOVA results confirmed these apparent differences were not statistically significant (all p-values > 0.05), indicating that while experience may contribute to professional development, age alone does not determine teaching reflection, confidence, or research productivity. These findings suggest that institutions should focus on structured support systems rather than age-based assumptions - implementing mentoring programs to accelerate early-career faculty growth while creating opportunities for senior faculty to share expertise. The results ultimately highlight that strategic institutional support, rather than chronological age, serves as the key driver of faculty development, with targeted interventions potentially helping all educators achieve similar levels of professional excellence regardless of career stage. This underscores the importance of cultivating an inclusive academic environment that recognizes individual needs while leveraging the collective wisdom of a multigenerational faculty body.

Age brings trends, not destinies. While experience may nurture reflective teaching and confidence, institutional culture and support systems are the true levers for equitable faculty growth. By investing in early-career development while harnessing the wisdom of senior faculty, institutions can cultivate a thriving academic community—regardless of age.

Table 7. Differences in Reflective Teaching, Self-Efficacy, and Research Practices Based on Age ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Reflective Teaching	Between Groups	1.713	3	.571	1.529	.218
	Within Groups	19.418	52	.373		
	Total	21.132	55			
Self-Efficacy	Between Groups	1.435	3	.478	2.711	.054
	Within Groups	9.172	52	.176		
	Total	10.606	55			
Research Practice	Between Groups	1.565	3	.522	.939	.429
	Within Groups	28.879	52	.555		
	Total	30.444	55			

The analysis of data in Table 8 revealed minimal differences in faculty members' reflective teaching, self-efficacy, and research practices across educational attainment levels. While descriptive statistics showed slight variations—such as higher reflective teaching scores among master’s degree holders (M=3.95) and higher research practice scores among those with master’s units (M=4.02)—ANOVA results confirmed these differences were not statistically significant (all *p* > 0.05). Notably, doctorate holders did not outperform others in research engagement (M=3.57), challenging the assumption that advanced degrees inherently boost scholarly productivity.

These findings suggest that formal education alone does not determine teaching reflection, confidence, or research output. Instead, factors like institutional support, mentorship, and professional development opportunities may play more critical roles. For instance, the disconnect between higher degrees and research practice highlights a need for stronger research cultures—through grants, reduced teaching loads, or collaborative projects—to incentivize scholarly work.

Degrees open doors, but they don’t guarantee growth. The absence of significant differences across educational levels underscores that faculty development must look beyond credentials. Institutions can achieve greater impact by cultivating environments where continuous learning, mentorship, and research support thrive—ensuring all faculty, regardless of their highest degree, can excel as reflective educators and engaged scholars.

Table 8. Differences in Reflective Teaching, Self-Efficacy, and Research Practices based on Educational Attainment ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Reflective Teaching	Between Groups	.096	4	.024	.058	.994
	Within Groups	21.036	51	.412		
	Total	21.132	55			
Self-efficacy	Between Groups	.095	4	.024	.115	.977
	Within Groups	10.511	51	.206		
	Total	10.606	55			
Research Practice	Between Groups	1.066	4	.267	.463	.763
	Within Groups	29.377	51	.576		
	Total	30.444	55			

As shown in Table 9, the study observed a general trend where faculty with more years of service showed higher mean scores in reflective teaching, self-efficacy, and research practice, though these differences were not statistically significant (all p-values > 0.05). Notably, research engagement dipped slightly among those with 21-25 years of service, while peaking for faculty with 26-30 years of experience.

1. Experience Matters but Isn't Everything: While longer-serving faculty tended to score higher in teaching reflection and confidence, the lack of statistical significance suggests that simply accumulating years of service doesn't guarantee professional growth. The quality and nature of those years - including ongoing development opportunities - likely matter more than duration alone.

2. The Research Engagement Paradox: The unexpected dip in research activity during mid-career (21-25 years) may reflect common challenges like increased administrative duties or career plateaus. This finding highlights the need for targeted support during this critical phase to maintain research productivity.

3. Early-Career Support is Crucial: The consistently lower scores among newer faculty members emphasize the importance of structured onboarding programs that combine teaching mentorship with research skill development.

Years in the classroom build wisdom, but they don't automatically build better educators or researchers. These findings remind us that institutional support systems - from reduced teaching loads for mid-career faculty to research mentorship for early-career staff - are essential to translate experience into excellence. Rather than assuming time will improve practice, universities must actively cultivate growth at every career stage.

Table 9. Differences in Reflective Teaching, Self-Efficacy, and Research Practices Based on Years in Service ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Reflective Teaching	Between Groups	1.976	6	.329	.812	.566
	Within Groups	19.058	47	.405		
	Total	21.034	53			
Self-efficacy	Between Groups	.597	6	.100	.480	.820
	Within Groups	9.744	47	.207		
	Total	10.341	53			
Research Practice	Between Groups	3.611	6	.602	1.058	.401
	Within Groups	26.729	47	.569		
	Total	30.340	53			

The ANOVA results in Table 10 revealed no statistically significant differences in reflective teaching ($p=0.779$), self-efficacy ($p=0.598$), or research practice ($p=0.157$) based on faculty employment status (full-time, part-time, or temporary). While the part-time faculty showed slightly higher scores across all areas - particularly in research practice - these variations were not significant. Temporary faculty members demonstrated the lowest research engagement levels among the groups.

1. Employment Status Doesn't Determine Performance: The lack of significant differences challenges assumptions that full-time faculty inherently perform better. Part-time faculty's strong showing suggests teaching and research quality aren't tied to employment type.

2. The Part-Time Research Paradox: Part-time faculty's higher research scores may indicate they maintain active research careers elsewhere or have more flexibility to pursue scholarship. This highlights untapped potential among non-full-time faculty.

3. Temporary Faculty Need Targeted Support: While differences weren't statistically significant, temporary faculty's lower research scores likely reflect systemic barriers like limited access to resources, job insecurity, or heavier teaching loads that discourage research investment.

An employment contract doesn't define a faculty member's potential. These findings reveal that teaching excellence and research capability exist across all employment types but may manifest differently. Institutions that recognize and nurture this potential - by removing barriers for temporary faculty and leveraging part-time faculty's research strengths - can build a more robust, inclusive academic community.

Table 10. Differences in Reflective Teaching, Self-Efficacy, and Research Practices Based on Employment Status ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Reflective Teaching	Between Groups	.198	2	.099	.250	.779
	Within Groups	20.934	53	.395		
	Total	21.132	55			
Self-efficacy	Between Groups	.204	2	.102	.520	.598
	Within Groups	10.402	53	.196		
	Total	10.606	55			
Research Practice	Between Groups	2.051	2	1.026	1.915	.157
	Within Groups	28.392	53	.536		
	Total	30.444	55			

While the differences in means are small, Assistant Professors tend to have slightly higher reflective teaching scores, Associate Professors have higher self-efficacy, and Instructors report more engagement in research.

Statistical analysis revealed no significant differences (all $p>0.05$) in reflective teaching, self-efficacy, or research practice across academic ranks. Notably:

- Instructors showed marginally higher research engagement than senior colleagues
- All ranks demonstrated comparable teaching reflection and confidence levels

1. The Rank Paradox: Traditional promotion metrics don't correlate with teaching quality or research output, suggesting formal titles may not reflect actual performance capabilities

2. Early-Career Research Drive: Instructors' stronger research practice may reflect:

- Career advancement pressures
- Recent PhD training momentum
- Fewer administrative burdens than senior faculty

3. Equitable Development Works: The consistency across ranks validates institution-wide support systems, while highlighting the need to:

- Sustain junior faculty's research momentum through tenure-track
- Re-engage senior faculty with protected research time

University may implement rank-blind professional development programs with tiered incentives: research grants for instructors, teaching innovation awards for associate professors, and leadership-scholar hybrid roles for full professors to leverage each career stage's unique strengths.

Table 11. Differences in Reflective Teaching, Self-Efficacy, and Research Practices Based on Academic Rank ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Reflective Teaching	Between Groups	.154	2	.077	.194	.824
	Within Groups	20.978	53	.396		
	Total	21.132	55			
Self-efficacy	Between Groups	.109	2	.054	.275	.761
	Within Groups	10.497	53	.198		
	Total	10.606	55			
Research Practice	Between Groups	.025	2	.013	.022	.978
	Within Groups	30.418	53	.574		
	Total	30.444	55			

5. Qualitative Findings: Faculty Research & Instruction Insights

Table 12. Key Themes and Participant Voice

Theme	Key Findings	Representative Quotes
Reflective Teaching	Drives teaching/research improvement	"Reflective practice allows me to continuously evaluate and improve my teaching methods, ensuring that my students receive the best possible learning experience. It also drives my research forward by helping me identify gaps, refine methodologies, and explore innovative approaches to knowledge creation."
	Helps address biases and methodological gaps	"Reflection enables me to critically examine my own biases, ensuring that my teaching and research remain objective and inclusive. By continuously analyzing my methodologies, I can identify gaps and refine my approach, leading to more rigorous and impactful academic work."
	Enhances inclusive pedagogy	"After each lecture, I journal what worked his directly improves my next study's design."
Self – Efficacy	High confidence in study design	"My confidence in study design allows me to develop robust, methodologically sound research that yields reliable and meaningful results. I carefully structure each study to ensure clarity, validity, and relevance, empowering me to contribute valuable insights to my field with certainty."
	Need support in: Research question formulation	"While I have confidence in my ability to conduct research, I acknowledge that problem formulation is a crucial step that benefits from collaboration and feedback. Seeking support from peers and mentors allows me to refine my research questions, ensuring they are well-structured, relevant, and impactful."

Research Practices	Need support in: Mixed methods approach	"I am confident in my research abilities, but I recognize that mastering mixed methods approaches requires guidance"
	Software (SPSS/R) training	"I can run ANOVA but struggle to frame impactful questions."
	Low knowledge and confidence in Publication	"I need to know more about publication processes. "
	Research Improvement	"By continuously refining my research practices, I enhance both the quality of my studies and the effectiveness of my teaching."
	Collaboration Opportunities	By working with colleagues across disciplines, I gain new perspectives that enhance the depth and impact of my work. Engaging in collaborative projects also provides access to diverse methodologies and resources, strengthening the overall quality of my research contributions."
	Societal Impact	"I strive to contribute to policies, innovations, and solutions that improve lives. Engaging with communities and industries allows my work to have a lasting impact beyond academia."
	Support from the University	"Institutional support plays a crucial role in advancing my research. Access to funding, mentorship programs, and interdisciplinary collaboration opportunities allows me to refine methodologies, expand my studies, and contribute impactful findings to my field."
Barriers	"Despite my commitment to research, several challenges hinder my progress. Heavy teaching loads, limited funding, and administrative responsibilities often compete for time and resources. Additionally, access to specialized training and mentorship in advanced methodologies remains a crucial need."	

5.1. CvSU Naic Faculty Enhancement and Development Plan

Continuous faculty development is essential to improving teaching effectiveness, confidence, and research engagement. This program aims to enhance faculty members' ability to reflect on their teaching practices, strengthen their self-efficacy, and advance their research capabilities. By integrating these components, faculty members can improve student learning outcomes, adapt to evolving educational trends, and contribute to academic research.

Table 13. Strengthening Reflective Teaching, Self-Efficacy and Research Practice for Professional Growth

Component	Objectives	Activities/Strategies	Timeline	Expected Outcomes	Responsible Units/Personnel
Reflective Teaching	<ul style="list-style-type: none"> Improve faculty's ability to assess and refine teaching methods Foster continuous self-improvement in pedagogy 	<ul style="list-style-type: none"> Conduct reflective Teaching Workshops Implement Teaching Reflection Groups for peer sharing Develop Teaching Portfolios for self-assessment 	Month 1-6	<ul style="list-style-type: none"> Enhanced self-awareness in teaching. More effective and adaptive instructional strategies 	<ul style="list-style-type: none"> Office of the Director for Instruction; Department Chairs; Faculty Development Committee
Self-Efficacy Development	<ul style="list-style-type: none"> Strengthen faculty confidence in teaching and leadership Improve resilience in handling classroom challenges. 	<ul style="list-style-type: none"> Organize classroom management & Self-efficacy training. Establish a peer mentorship program for guidance. Encourage faculty to lead curriculum innovations. 	Month 3-9	<ul style="list-style-type: none"> Increased confidence in instructional delivery. Greater faculty engagement in leadership roles. 	<ul style="list-style-type: none"> HRMO; Department Chairs; Faculty Development Committee

Research Capacity Building	<ul style="list-style-type: none"> Enhance faculty’s ability to conduct and publish research. Develop proficiency in research tools and methodologies 	<ul style="list-style-type: none"> Conduct research methodology & data analysis training. Establish research clusters for collaborative studies. Provide publication support & journal coaching. 	Month 4-12	<ul style="list-style-type: none"> Increased research output and publications More faculty participation in conferences 	<ul style="list-style-type: none"> Research and Extension Office; Quality Assurance Office; Faculty Research Committee
Application & Output Generation	<ul style="list-style-type: none"> Implement research- based improvements in teaching. Promote dissemination of faculty research. 	<ul style="list-style-type: none"> Encourage action research projects. Support conference presentations & research dissemination. Facilitate Grant writing & 	Month 6-12	<ul style="list-style-type: none"> More faculty contributions to educational research. Enhanced institutional research reputation. 	<ul style="list-style-type: none"> Instructional Development Committee; Research and Extension Office; Department Chairs

To ensure the effectiveness of the program, regular assessments will be conducted:

Evaluation Method	Frequency	Purpose	Responsible Person
Faculty Surveys& Feedback	Quarterly	Measure satisfaction and identity areas for improvement	Director for Faculty Development / <u>HRMO</u>
Peer & Self-Assessment Reports	Biannually	Evaluate progress in reflective teaching and self-efficacy	Department Chair / Program Coordinators
Research Output Monitoring	Annually	Track faculty publications, presentations, and action research implementation.	Director for Research and Extension
Impact on Student Learning	Annually	Assess improvements in student engagement and learning outcomes.	Dean / Academic Quality Assurance Officer

5.2. *Expected Outcomes*

- Improved faculty reflective teaching practices leading to enhanced student engagement.
- Increased teaching self-efficacy, fostering greater confidence and innovation in pedagogy.
- Strengthened research culture, resulting in higher research output, publications, and conference presentations.

6. **Conclusion**

This study explored the relationships among reflective teaching, self-efficacy, and research practices among faculty members at Cavite State University-Naic. The findings indicate a strong positive correlation among these three variables, highlighting the significant role of reflective teaching and self-efficacy in fostering faculty engagement in research. Faculty members who engage in reflective teaching practices tend to exhibit higher self-efficacy, which in turn enhances their research productivity.

The thematic analysis of the focus group discussion further reinforced these findings. Faculty members acknowledged the importance of reflection in their teaching and research, recognizing it as a tool for continuous learning and improvement. Self-efficacy in research varied, with some participants expressing confidence in research design and data collection methods, while others emphasized the need for additional support in formulating research questions, utilizing research tools, and mastering statistical software. Motivation for research was largely driven by personal passion, professional growth, and the potential impact of research, though challenges such as time constraints, funding limitations, and lack of institutional support were commonly cited.

Notably, age emerged as the only demographic factor significantly associated with self-efficacy, suggesting that more experienced educators tend to develop stronger confidence in their teaching abilities over time. However, other demographic characteristics—including gender, educational attainment, years of service, employment status, and academic rank—did not significantly predict reflective teaching, self-efficacy, or research practice. These findings suggest that professional growth and research engagement are influenced more by individual and institutional factors rather than demographic variables.

The results underscore the importance of institutional support in promoting reflective teaching and research productivity. Given that no significant differences were found across academic ranks, employment status, or departments, faculty

development programs should focus on creating equitable opportunities for all educators rather than being segmented based on demographic attributes. Additionally, universities should integrate structured reflective teaching practices, mentorship programs, and research incentives to enhance self-efficacy and encourage faculty engagement in scholarly work.

While this study provides valuable insights into the interrelationships among reflective teaching, self-efficacy, and research practice, further research is needed to explore additional psychological and institutional factors that may influence these variables. Future studies employing longitudinal and qualitative approaches can offer deeper insights into the evolving nature of faculty self-efficacy and research engagement over time.

Overall, the findings emphasize the critical role of reflective teaching and self-efficacy in shaping faculty members' research engagement, reinforcing the need for strategic institutional interventions to cultivate a culture of continuous professional growth, research excellence, and pedagogical innovation.

Future studies should track these interventions' long-term impact, but the path forward is evident: equitable support systems unlock every faculty member's research potential.

7. Recommendation

The findings of this study highlight actionable strategies to enhance reflective teaching, self-efficacy, and research productivity among faculty. Below are evidence-based recommendations structured for institutional implementation: To translate the study's findings into practice, institutions should implement a three-tiered support system targeting the key areas of reflective teaching, self-efficacy, and research engagement. First, integrate brief but structured reflection practices into faculty routines, such as weekly teaching journals that prompt research connections and peer discussion groups to share classroom insights. Second, build research confidence through accessible, bite-sized training - offering 30-minute weekly skill sessions on fundamental research tasks and establishing mentor-mentee partnerships that meet regularly. Third, address the most cited barriers by guaranteeing protected research time through modest workload adjustments, providing shared access to essential software with simplified guides, and creating small-scale grant opportunities for pilot studies. These efforts should be complemented by simple quarterly check-ins to monitor progress on research time allocation, confidence levels, and evolving support needs. Crucially, all initiatives must be designed for universal access, ensuring equitable participation opportunities for faculty across employment types and career stages. This balanced approach - combining reflective practice, skill-building, and barrier reduction - creates sustainable conditions where teaching improvement and research productivity can mutually reinforce one another. By starting with these manageable yet strategic interventions, institutions can foster meaningful change without overwhelming resources or faculty time.

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