

Research Behavior and Engagement of Teachers

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ABSTRACT: This study aimed to investigate the research behavior and engagement of the 105 in complete enumeration of public elementary school teachers in Sugbongcogon District, Division of Misamis Oriental, Specifically, it examined teachers' research behavior in terms of teacher competence, system improvement, executive competence, and expectations about research, as well as their research engagement across physical, cognitive, and emotional dimensions. Employing a correlational research design, an adapted questionnaire which was measured in a 5-point Likert scale was utilized and analyzed using descriptive statistics and Spearman's rho correlation. Results revealed that teachers demonstrate a very positive research behavior across all dimensions, and a high level of research engagement, Further, there is a very strong, statistically significant positive relationship between research behavior and research engagement. These findings indicate that positive research behavior among teachers is associated with higher engagement in research activities and may serve as a basis for strengthening research culture in public elementary schools.

KEYWORDS: research behavior, research engagement, teacher competence

I. INTRODUCTION

This study explored the relationship between teachers' research behavior and their engagement in scholarly activities within the basic education setting. Teachers who were more competent in research were generally more inclined to participate in research projects, contributing to their professional growth and improving instructional practices. Several factors influenced teachers' engagement in research, including institutional support, time availability, and perceived relevance to classroom instruction. Establishing a strong research culture in schools was considered essential in maximizing the benefits of educational inquiry for both teachers and learners.

Despite initiatives to strengthen research programs, teachers' participation in research remained limited. In several school divisions in the Philippines, Lagrio et al. (2022) found that teachers produced and presented fewer research outputs than expected. This trend reflected the difficulty of balancing teaching responsibilities with research demands. The limited number of teacher-led research projects highlighted the need for stronger support systems and practical interventions.

Research participation served as an important tool for innovation and classroom improvement. Through research, teachers identified instructional gaps, tested strategies, and developed evidence-based solutions. Simbajon (2022) emphasized that teachers played a vital role as knowledge builders, contributing to learners' development and national progress. Thus, the role of teachers as researchers became increasingly important in promoting continuous improvement in education.

To strengthen research engagement, the Department of Education implemented policies to institutionalize research across all levels of the department. DepEd Order No. 39, s. 2016, known as the Basic Education Research Agenda, identified priority research areas to support evidence-based decision-making. DepEd Order No. 16, s. 2017, introduced the Research Management Guidelines to manage research activities nationwide. These policies also supported the Basic Education Research Fund, which provided financial assistance for teachers conducting action research.

Furthermore, the Governance of Basic Education Act of 2001 required continuous improvement in education through research and policy reform. It emphasized that school-based studies should guide decision-making and program development. However, despite these policies, many teachers still lacked access to funding, technical guidance, and sufficient time for research. This situation revealed a gap between policy intentions and actual implementation.

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With these considerations in mind, the study was conducted in Sugbongcogon District. It assessed teachers' research behavior and engagement by examining their attitudes, practices, and perceived barriers. The findings were expected to guide school leaders and education officials in designing interventions that would strengthen teacher participation in research and support quality improvement in basic education.

This study was anchored in Albert Bandura's Social Learning Theory (2017), which explains that individuals learn behaviors, values, and skills through observation, imitation, and modeling within a social context. In education, the Social Learning Theory highlights how teachers' research behavior and engagement are shaped not only by their own motivation but also by the influence and guidance of school leaders and colleagues (Kowalczyk-Wałędziak & Ion, 2024). When school leaders model competence in research and provide supportive supervision, teachers are more likely to adopt positive research behaviors and engage in research more actively.

Supporting this theoretical lens, the study of Günyel and Bilgivar (2023) explored teachers' attitudes and behaviors toward educational research using a mixed-method design. Their findings revealed that teachers considered educational research highly necessary, particularly in areas such as teacher training, curriculum, leadership, and classroom strategies. This aligns with Bandura's theory by showing how teachers' perceptions of research are influenced by the professional culture within their institutions. When teachers observe research being valued and practiced in their environment, they are more inclined to view it, as beneficial to their own professional development and student learning, thereby strengthening their behavior toward research. Meanwhile, the study of Gutierrez (2024) examined the relationship among research engagement, attitudes, and competencies of teacher-researchers in Batangas City. The study indicated that teachers were physically, cognitively, and emotionally engaged in research. However, they reported feeling slightly less competent at systematically analyzing data and drawing conclusions, which are essential to research. Notably, the study found significant relationships between research engagement, competencies, and attitudes. This suggests that engagement grows stronger when the professional environment encourages observation, collaboration, and practice.

Taken together, Bandura's theory and the findings of Günyel and Bilgivar (2023) and Gutierrez (2024) provided a coherent basis for understanding teachers' research behavior and its effects on teachers' research engagement. Furthermore, the theory emphasizes social influence and modeling. At the same time, empirical studies highlight teachers' recognition of research as essential to professional growth and personal development, a significant factor affecting the varying levels of competence and engagement among teachers.

II. METHODOLOGY

This study used a quantitative research approach to gather measurable data on teachers' behavior toward research and its impact on their engagement. Through structured questionnaires, the study captured patterns of research behavior and presented them systematically and objectively.

A descriptive correlational design was employed to describe teachers' research behavior and determine its relationship with teachers' engagement. This design was appropriate for identifying connections between variables without implying causation, providing a clear picture of how these elements were linked (Saro et al., 2023).

The findings were expected to reveal significant insights into teachers' attitudes toward research and how these influenced their engagement. The results served as a basis for developing programs to strengthen the research culture among teachers in the district.

To address the first and second statements of the problem, the study employed descriptive statistics such as the Mean, Median, and Standard Deviation because the assumption of normality was not met. The use of these measures provided a clear description of the distribution and overall tendencies of the responses.

For the third statement of the problem, the Spearman rho correlation analysis was used to determine whether a significant relationship exists between respondents' levels of research behavior and research engagement. The analysis was tested at the 0.05 significance level, ensuring that the identified relationship was statistically significant.

III. RESULTS AND DISCUSSION

Problem 1. What is the level of the respondents' research behavior:

- 1.1. teachers' competence;
- 1.2. system improvement;
- 1.3. executive competence;
- 1.4. expectations about research;

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Table 1 presents the overall level of the respondents' research behavior across four dimensions: Teacher Competence, System Improvement, Executive Competence, and Expectations about Research. All four dimensions had a median score of 5 with $SD=0.916$, qualitatively described as Very Positive. This indicates a very positive and cohesive level of research behavior among the respondents. The relatively low variability further suggests that perceptions are consistently shared across the group, reflecting a stable and well-established research orientation within the district. The findings imply that teachers collectively demonstrate strong research-related behaviors characterized by competence, collaboration, responsiveness to leadership, and positive expectations for scholarly engagement.

In terms of relative consistency, Teacher Competence ($SD = 0.920$) and Executive Competence ($SD = 0.935$) show slightly lower dispersion than the other dimensions, suggesting stronger consensus among respondents regarding their personal research capabilities and the support they receive from school leaders. System Improvement ($SD = 0.945$) likewise reflects high agreement, indicating that teachers perceive research as a strategic tool for institutional development. These uniformly high medians demonstrate that research behavior is embedded not only at the individual level but also within the organizational structure, reinforcing the interconnectedness of teacher initiative and administrative support.

Table 1. Summary Result of Respondents' Research Behavior

Teachers' Behavior towards Research	Median	SD	Qualitative Description
1. Teacher Competence	5	0.920	Very Positive
2. System Improvement	5	0.945	Very Positive
3. Executive Competence	5	0.935	Very Positive
4. Expectations about Research	5	0.995	Very Positive
Overall	5	0.916	Very Positive

Note: Median Interpretation:5=Very Positive; 4=Positive; 3=Moderate; 2=Negative; 1=Very Negative

Among the four dimensions, Expectations about Research ($SD = 0.995$) shows the greatest dispersion, although it remains within a narrow range. This suggests minor variations in how teachers perceive the broader professional and career-related benefits of research engagement. While the central tendency remains strongly positive, differences in professional aspirations, years of service, or exposure to research opportunities may account for slight variations in expectations. Nevertheless, the consistent median of 5 across all dimensions confirms that research is perceived as meaningful, valuable, and professionally relevant. These results align with Günyel and Bilgivar (2023), who emphasized that research behavior is influenced by both intrinsic motivations such as self-development and contribution to society and extrinsic incentives, including recognition and career advancement.

These findings support the concept of teachers' research behavior described by Aziz Al-Otaibi and Balaj Alotaibi (2023) and Miao et al. (2025). Aziz Al-Otaibi and Balaj Alotaibi (2023) emphasized that supportive research environments, access to resources, and collaborative structures encourage teachers to engage actively in research activities that contribute to both professional development and institutional improvement. Similarly, Miao et al. (2025) highlighted that teachers' confidence, motivation, and institutional support play a crucial role in sustaining research engagement and strengthening a research-oriented culture within educational institutions.

Problem 2. What is the level of the respondents' research engagement:

- 2.1. cognitive research engagement;
- 2.2. emotional research engagement;
- 2.3. physical research engagement;

Table 2. Summary Result of Research Engagement

Research Engagement	Median	SD	Qualitive Description
1. Physical Research Engagement	4	0.785	High
2. Cognitive Research Engagement	4	0.897	High
3. Emotional Research Engagement	4	0.890	High
Overall	4	0.818	High

Note: Median Interpretation:5=Very High; 4=High; 3=Moderate; 2=Low; 1=Very Low

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Table 2 presents the overall level of the respondents' Research Engagement across three dimensions: Physical Engagement, Cognitive Engagement, and Emotional Engagement. All three dimensions obtained a median score of 4, qualitatively described as High or practiced Most of the Time. It has an overall median of 4 which indicates a high level of research engagement among the respondents. This suggests that teachers consistently participate in research activities through intellectual involvement, observable research behaviors, and positive emotional commitment toward scholarly tasks.

The results show that the three dimensions of research engagement demonstrate balanced participation among teachers. Physical Engagement reflects teachers' frequent involvement in research-related activities such as gathering data, documenting findings, and collaborating with colleagues. Cognitive engagement highlights teachers' intellectual effort in identifying research problems, analyzing literature, and interpreting research findings. Emotional Engagement indicates teachers' motivation, confidence, and positive attitudes toward conducting research. Although the median values are the same across the three dimensions, slight variations in the standard deviations indicate minor differences in consistency among responses. Nevertheless, the results confirm that teachers demonstrate a multidimensional form of research engagement rather than focusing on only one aspect.

The findings further suggest that teachers perceive research as relevant and applicable to their teaching practices. When research activities address actual classroom concerns, teachers are more likely to invest both intellectual and practical effort while maintaining positive motivation throughout the process. The consistency between cognitive and physical engagement indicates that teachers are able to move from analyzing instructional problems to implementing research-based solutions. At the same time, emotional engagement sustains their persistence and commitment in completing research tasks. This pattern demonstrates that research participation among teachers is both purposeful and integrated into their professional responsibilities.

These findings support the perspective of Mills et al. (2025) and Günyel and Bilgivar (2023), which emphasized that research engagement among teachers is multidimensional, involving behavioral participation, intellectual effort, and emotional commitment. Mills et al. (2025) explained that effective research engagement occurs when teachers actively participate in research processes while maintaining motivation and confidence in their scholarly abilities. Similarly, Günyel and Bilgivar (2023) highlighted that when teachers are involved in manageable and meaningful research activities, their professional competence and willingness to innovate in instructional practices are strengthened. These perspectives reinforce the importance of sustaining balanced engagement across physical, cognitive, and emotional dimensions to strengthen the research culture within schools.

Problem 3. Is there a significant relationship between the respondents' research behavior and research engagement?

Table 3. Research Behavior and The Level of Research Engagement

Behavior Toward Research	Research Engagement			
	Physical Engagement	Cognitive Engagement	Emotional Engagement	Overall
	<i>Spearman rho</i> <i>p-value</i>	<i>Spearman rho</i> <i>p-value</i>	<i>Spearman rho</i> <i>p-value</i>	<i>Spearman rho</i> <i>p-value</i>
Teacher's Competence	0.690 Spc 0.000 S	0.677 Spc 0.000 S	0.655 Spc 0.000 S	0.700 Vspc 0.000 S
System Improvement	0.678 Spc 0.000 S	0.674 Spc 0.000 S	0.688 Spc 0.000 S	0.709 Vspc 0.000 S
Executive Competence	1.000 Vspc 0.000 S	0.850 Vspc 0.000 S	0.858 Vspc 0.000 S	0.926 Vspc 0.000 S
Expectations about Research	0.700 Vspc 0.000 S	0.724 Vspc 0.000 S	0.716 Vspc 0.000 S	0.751 Vspc 0.000 S
Overall	0.770	0.760	0.788	0.809

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Vspc	Vspc	Vspc	Vspc
0.000	0.000	0.000	0.000
S	S	S	S

Note: vspc/vsnc=strong positive/negative correlation (± 0.70 to ± 1.00); spc/snc=strong positive/negative correlation (± 0.50 to ± 0.69); mpc/mnc= moderate positive/negative correlation (± 0.30 to ± 0.49); wpc/wnc= weak positive/negative correlation (± 0.10 to ± 0.29); vwpc=very weak positive/negative correlation (0.00 to ± 0.10); p-value; s=statistically significant; nss=not statistically significant

Table 3 presents the relationship between respondents' levels of research behavior and research engagement using Spearman's rho correlation analysis. The results reveal that all dimensions of research behavior are positively and significantly correlated with physical, cognitive, emotional, and overall research engagement. All computed p-values are reported as 0.000 ($p < 0.001$), indicating statistically significant relationships at the 0.05 level of significance. The overall correlation between total research behavior and total research engagement is $\rho = 0.809$, interpreted as a very strong positive correlation. This indicates that higher levels of research behavior are associated with higher levels of research engagement among teachers. In other words, teachers who demonstrate stronger research-related behaviors tend to exhibit greater cognitive, emotional, and physical involvement in research activities.

Examining the specific dimensions, Teacher Competence shows strong positive correlations with physical engagement ($p = 0.690$), cognitive engagement ($p = 0.677$), emotional engagement ($p = 0.655$), and overall engagement ($p = 0.700$). These coefficients fall within the strong correlation range, indicating that teachers who perceive themselves as competent in conducting research are more likely to think critically about research processes, actively perform research-related tasks, and maintain positive emotional commitment toward research activities. Similarly, system Improvement demonstrates strong to very strong positive correlations across all engagement dimensions, suggesting that teachers who actively contribute to improving school systems through research tend to be more involved intellectually, behaviorally, and emotionally in research practices.

Among the variables, Executive Competence exhibits the strongest relationships, including a perfect correlation with physical engagement ($p = 1.000$) and very strong correlations with cognitive engagement ($p = 0.850$), emotional engagement ($p = 0.858$), and overall engagement ($p = 0.926$). These results indicate a strong association between leadership competence and teachers' engagement in research activities. However, the perfect correlation with physical engagement should be interpreted cautiously since such values are rare in behavioral studies and may indicate similarities in measurement or overlapping constructs. Nevertheless, the findings highlight the importance of leadership support, mentoring, and institutional guidance in strengthening teachers' active participation in research-related tasks.

Furthermore, Expectations about Research demonstrate very strong positive correlations with all forms of engagement, with coefficients ranging from $\rho = 0.700$ to $\rho = 0.751$. This suggests that teachers who hold positive beliefs about the value and relevance of research are more likely to invest intellectual effort, sustain emotional motivation, and actively participate in research processes. When research is viewed as meaningful and beneficial to professional practice, teachers are more inclined to engage consistently across its cognitive, emotional, and behavioral dimensions.

These findings support the perspectives of Mills et al. (2025), Günyel and Bilgivar (2023), Wang et al. (2022), and Occeña and Paglinawan (2024), who emphasized that research engagement among teachers is influenced by competence, leadership support, and positive attitudes toward research. Teachers who perceive strong institutional support and recognize the professional value of research are more likely to remain actively engaged in research-related activities. Overall, the results confirm a statistically significant and substantial relationship between research behavior and research engagement. However, because the study employed a descriptive-correlational design, the findings indicate strong associations rather than direct causal relationships.

The overall results of this chapter imply that research behavior and research engagement are interconnected constructs that reinforce one another within both individual and institutional contexts. When teachers feel competent, supported by leadership, and optimistic about the value of research, they are more likely to think critically, act consistently, and remain emotionally invested in research processes. These findings highlight the importance of maintaining a supportive research culture through mentoring programs, accessible research resources, collaborative research opportunities, and active leadership involvement. Strengthening these institutional conditions may help ensure that teachers' engagement in research becomes not only frequent but also sustainable, ultimately contributing to continuous instructional improvement and school development.

IV. CONCLUSIONS

Based on the findings of the study, the following conclusions are drawn:

1. Research is viewed as an integral part of their professional responsibilities and school practices.
2. Teachers have consistent involvement in research-related tasks, apply critical thinking skills, and sustain positive attitudes toward research activities.
3. Teachers' positive research behavior creates a better research engagement.

V. RECOMMENDATIONS

Based on the findings and conclusions of the study, the following recommendations are offered:

1. School heads are encouraged to sustain the teachers' positive research behavior by asking them to have at least one research study every school year.
2. School heads may institutionalize regular research-based collaborative activities.
3. School heads may design integrated research support systems that significantly contribute to higher levels of research engagement.

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