

Attitude and Self-Efficacy on Research as Predictors of Research Engagement among Elementary Teachers

Krishna T. Liporada

Holy Cross of Davao College, Philippines

ORCID ID: <https://orcid.org/0009-0003-7279-6829>

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ABSTRACT

Teachers are poorly engaged in research. The influence of attitude toward research and research self-efficacy on research engagement is examined. Using predictive design, collecting 317 data from elementary teachers selected through stratified random sampling, utilizing a survey questionnaire, findings revealed that determinants together significantly influenced the criterion, partly affirming the Theory of Planned Behavior. Further studies to locate the remaining 40.1% variance in the criterion is recommended. Exploring potential variables emerging from qualitative studies may supplement such a recommendation.

Keywords: Attitude towards research, self-efficacy on research, predictors of research engagement, elementary teachers

INTRODUCTION & LITERATURE REVIEW

Low teacher participation in research-related activities is a persistent concern in educational systems worldwide. When teachers are minimally involved in research, their ability to integrate evidence-based findings into classroom practice is reduced, limiting both instructional quality and professional growth. The present challenge undermines the role of research as a foundation for effective teaching and continuous educational improvement (Kowalczyk-Wałędziak & Ion, 2024).

Across different countries, low levels of teacher engagement with research have been consistently reported. In Cambodia, many university English teachers show minimal involvement in research, with activities often confined to fulfilling degree requirements or supervising students rather than engaging in sustained inquiry or publication (Heng et al., 2024). In Indonesia, teachers in English departments rarely consult research literature, and research engagement is irregular, usually undertaken only when immediately required (Floris et al., 2024). Similarly, in Kazakhstan, teachers across various educational settings demonstrate low and inconsistent engagement in research despite acknowledging its importance for improving teaching and learning (Urazalina, 2025). These international findings indicate that limited teacher research engagement is a widespread issue affecting educational quality across contexts.

In the Philippine setting, teachers' low research engagement is likewise a growing concern. Studies revealed that beginning teachers at Leyte Normal University experience hesitation and difficulty in conducting research, which limits their participation in scholarly activities (Flores, 2024). In Cagayan de Oro City, teachers' actual research engagement remains low, suggesting that many capable educators do not consistently participate in research-related tasks (Urbina & Hinacay, 2025). Moreover, in Misamis Oriental, a weak research culture among teachers has been associated with limited professional development opportunities and minimal growth in pedagogical knowledge and instructional practices (Naldo & Ubayubay, 2024). These concerns align with Sustainable Development Goal 4, which emphasizes the need for qualified teachers who employ evidence-based practices to ensure inclusive and equitable quality education (UNESCO, 2016).

Poor teacher research engagement limits the use of evidence-based practices, weakening professional development and instructional effectiveness (Floris et al., 2024). This consequence served as the impetus for undertaking the present study.

This study supports Sustainable Development Goal 4 by enhancing teachers' research engagement, which improves their instructional competence and the quality of education they deliver. It provides school heads with insights into the factors that influence research engagement, enabling them to create supportive environments for professional growth and effective teaching. Additionally, it benefits teachers and future researchers by deepening understanding of the psychological determinants of research engagement, guiding instructional practices, and informing future studies and interventions to promote quality education.

This study determined the influence of attitude toward research and research self-efficacy on research engagement. Specifically, it achieved the subsequent objectives:

1. To determine the levels of attitude toward research in terms of research skills, positive rating, barriers to research, negative rating; research self-efficacy in terms of conceptualization, implementation, early tasks, and presenting the results; and research engagement in terms of knowledge of research engagement, belief about research engagement, and attitude towards research engagement;
2. To determine the significance of the correlation between attitude toward research, research self-efficacy, and research engagement.
3. To determine the combined degree of influence of attitude toward research and research self-efficacy on research engagement

The following null hypotheses were evaluated at a 0.05 significance level:

Ho₁: Attitude toward research, research self-efficacy, and research engagement are not significantly correlated.

Ho₂: Attitude toward research and research self-efficacy combined have no significant degree of influence on research engagement.

This study is grounded in established theoretical foundations, the Theory of Planned Behaviors (TPB) by Ajzen (1991). The theory posits that an individual's actions are guided by intention, which is formed through three fundamental elements: attitudes, subjective norms, and perceived control over the behavior (Ajzen, 1991). External influences can also directly facilitate or restrict actions, depending on the degree of personal control and the extent to which perceived behavioral control reliably reflects actual behavior. This study focuses specifically on attitudes and perceived behavioral control, while other elements, such as subjective norms and intentions, are not included.

The variables used are attitude toward research, as indicated by research skills, positive rating, barriers to research, and negative rating (Barrios et al., 2020), reflecting the theory's attitude factor. Research self-efficacy is indicated by conceptualization, implementation, early tasks, and presenting the results (Bieschke et al., 1993), which are considered as a perceived behavioral control factor in the theory. Research Engagement is indicated by knowledge of research engagement, beliefs about research engagement, and attitudes towards research engagement (Cang et al., 2025), which align with the behavior described in the theory. Although the Theory of Planned Behavior (TPB) includes subjective norms and intention as factors influencing behavior, this study limits these variables to focus solely on attitude and perceived behavioral control.

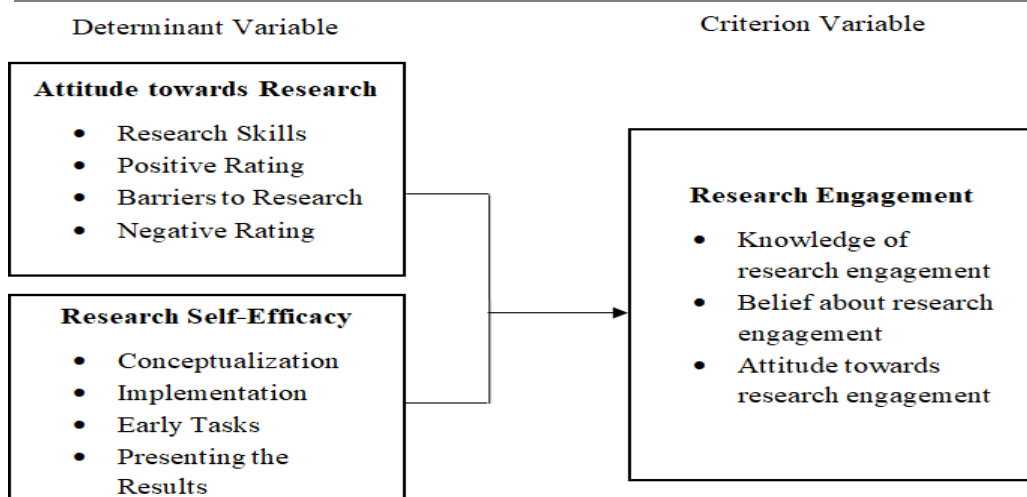


Figure 1. Conceptual Framework of the Study

METHODOLOGY

A diagnostic research design with quantitative methods was used to identify relationships among variables, explain causes, and draw conclusions (Oranga et al., 2025). This approach allows the researcher to examine how attitudes toward research and research self-efficacy influence research engagement.

The study was conducted in selected elementary schools within the Mati North District, Schools Division of the City of Mati, Province of Davao Oriental. The district consists of 25 public elementary schools, with six in far-flung areas and nineteen along the highway, offering a diverse academic setting for analysis.

This study involved public elementary school teachers in the Mati City Division, Province of Davao Oriental. From the overall pool of public elementary school teachers in Mati City Division, 317 participants were selected using a stratified proportional random sampling method to ensure representation from different groups within the population. Participation was voluntary, and all respondents provided informed consent before data collection. Respondents were assured they could withdraw from the study at any time if they felt uneasy.

A stratified, proportionate random sampling method was used by first dividing the population into subgroups, or strata, based on relevant characteristics, and then drawing samples from each stratum in proportion to their relative sizes in the population (Simkus, 2022). This approach obtained reliable data on how attitudes toward research and self-efficacy influence teachers' research engagement.

Data were collected using a structured, closed-ended questionnaire. These included multiple-choice items and a 4-point Likert scale. The tool was designed to collect standardized data on teachers' attitudes toward research. This allowed for quantitative analysis of responses (McCombes, 2025).

The collected data were analyzed using descriptive, correlational, and multiple linear regression techniques. Descriptive analysis summarized key features, including averages and frequency distributions (Bhandari, 2023). Correlational analysis evaluated the strength and direction of variable associations (James, 2019). Multiple linear regression was used to assess how independent variables predict the dependent variable (Dorta-González, 2023). The study used an adapted quantitative survey questionnaire developed from instruments of various authors. This was administered to the respondents. Before data collection, experts reviewed and validated the research instrument for clarity, relevance, and suitability.

Range of Means	Description	Frequency		
		Attitude Toward Research	Research Self-efficacy	Research Engagement
3.25 – 4.00	Very High	Very Good attitude	Very Strong research self-	Most engaged in

			efficacy	research
2.50 – 3.24	High	Good attitude	Strong research self-efficacy	More engaged in research
1.75 – 2.49	Low	Poor attitude	Weak research self-efficacy	Less engaged in research
1.00 – 1.74	Very Low	Very poor attitude	Very Weak research self-efficacy	Not engaged in research

Standards in interpreting the level of standard deviation:

Range	Description of Response	Interpretation
SD≤0.50	Highly Consistent	Strong uniform perception
SD=0.51-1.00	Moderately Consistent	Acceptable consistency
SD=1.01-1.50	Low Consistency	Differing perceptions
SD>1.50	Very Low Consistency	High variability and lack of consensus

Standard Interpretation of the Correlation Coefficient (r)

Range of r-value	Strength of Correlation	Interpretation
±0.00 - ±0.19	Very Weak	Negligible or almost no relationship
±0.20 - ±0.39	Weak	Low degree of relationship
±0.40 - ±0.59	Moderate	Substantial or fair relationship
±0.60 - ±0.79	Strong	High degree of relationship
±0.80 - ±1.00	Very Strong	Very high or near-perfect relationship

Ethical considerations were strictly followed throughout the study, in accordance with the Society for Moral Integrity and Legal Ethics (SMILE) of Holy Cross of Davao College (HCDC). The researcher secured informed consent, providing clear information on the study's purpose, procedures, and respondents' right to withdraw. Protection from harm was ensured for all mature participants. Reliability testing was conducted on the questionnaires.

Reliability Result		
Questionnaire	Cronbach's Alpha	Interpretation
Attitude Toward Research	0.884	Good/High
Research Self-efficacy	0.868	Good/High
Research Engagement	0.866	Good/High

RESULTS

Table 1 presents the descriptive statistics for the study's key variables: attitude toward research, research self-efficacy, and research engagement. Specifically, the table includes the number of participants, mean scores, standard deviations, and their respective descriptive interpretations, providing a comprehensive overview for subsequent analyses.

Table 1. Descriptive Table, n=317

Variables	Standard Deviation	Mean	Verbal Description
1. Attitude Towards Research	0.373	3.25	Very High
1.1 Research Skills	0.368	3.73	Very High
1.2 Positive Rating	0.344	3.76	Very High
1.3 Barriers to Research	0.699	3.12	High
1.4 Negative Rating	0.710	2.41	Low
2. Research Self-Efficacy	0.380	3.51	Very High
2.2 Conceptualization	0.440	3.45	Very High
2.2 Implementation	0.430	3.49	Very High
2.3 Early Tasks	0.440	3.63	Very High
2.4 Presenting the Results	0.480	3.46	Very High
3. Research Engagement	0.378	3.55	Very High
3.1 Knowledge	0.442	3.52	Very High
3.2 Belief	0.468	3.48	Very High
3.3 Attitude	0.402	3.64	Very High

The attitude towards research yielded an average score of 3.25, reflecting a very high level. The findings indicate that the teacher respondents have a very good attitude toward research and a strong commitment to professional growth. Two of its indicators are classified as very high, one as low, and the last as high, with a standard deviation of 0.373, indicating highly consistent responses and interpreted as a consistently strong response.

Furthermore, for Research Self-Efficacy, the overall mean remains 3.51, which falls within the very high range. The results reveal that the teacher respondents possess very strong research self-efficacy. All its indicators are described as very high. Given a variability measure of 0.380, it is described as highly consistent and shows a consistently strong response.

Moreover, the Research Engagement results fall clearly in the very high range. The overall mean is 3.55, indicating that teacher respondents were most engaged in research. All its indicators are also described as very high. With a variability measure of 0.378, this reflects a high response rate and a strong, consistent level of responses.

Table 2 is a correlation table. Showing the predictive variables involved in the study, namely attitude towards research and research self-efficacy, and the outcome variable, research engagement. The table also provides the correlation coefficient, significance level, hypothesis evaluation, and the corresponding interpretation.

Table 2. Test of Correlation

Predictor Variables	Research Engagement			
	r-value	p-value	Decision on Ho	Interpretation
Attitude Towards Research	0.282	0.000	Rejected	Significant
Research Self-Efficacy	0.771	0.000	Rejected	Significant

Specifically, the table shows that the correlation between attitude toward research and research engagement has a result showing a 0.000 probability value, indicating it is below the 0.05 threshold for statistical significance and a correlation coefficient of 0.282; hence, the null hypothesis was not supported, indicating that the correlation between these variables is weak but significant. Moreover, the correlation between research self-efficacy and research engagement was statistically significant ($p = 0.000$), with a correlation coefficient of 0.771, which was less than the significance level. The analysis indicates that this outcome rejects the null hypothesis, suggesting a strong, statistically significant relationship.

Both the attitude toward research and research self-efficacy show significant relationships with research engagement; research self-efficacy demonstrates a noticeably stronger association, indicating that teachers' confidence in their research ability plays a more influential role in their level of engagement.

Table 3 presents the results of the regression analysis. It contains the determinants involved in the study, namely attitude toward research and research self-efficacy, and the criterion variable, research engagement. The table further provides the regression estimates, standard errors, t-values, levels of significance, results of hypothesis testing, and their corresponding interpretations.

Table 3. Regression Table

Determinants	Research Engagement					
	Beta (β)	S.E	t-value	p-value	Decision on Ho	Interpretation
Constant	0.702	0.147	4.775	0.000	Rejected	Significant
Attitude Towards Research	0.073	0.038	1.946	0.053	Accepted	Not Significant
Research Self-Efficacy	0.748	0.037	20.179	0.000	Rejected	Significant

$R^2 = 59.90\%$; $F\text{-value} = 234.867$; $p\text{-value} = 0.000$; Remarks: Significant

Table 3 specifically shows that attitude toward research and research self-efficacy together account for an R-value of 59.90% in the combined degree of influence on research engagement. The corresponding probability value of 0.000, below the 0.05 established alpha level, indicates the null hypothesis was not supported. This outcome implies that the combined contribution of the determinants to the criterion is significant. Thus, as established in earlier analyses, the independent variables are significant determinants of research engagement.

1. Attitude toward research and research self-efficacy are significantly correlated with research engagement.

2. The combined degree of influence of attitude toward research and research self-efficacy on research engagement is strong and significant.

DISCUSSIONS

Attitude toward research and research self-efficacy are significantly correlated with research engagement

This study found that, together, attitude toward research and research self-efficacy are closely linked to research engagement. This finding supports the study by Gutierrez (2024), which highlights that positive attitudes toward research are associated with greater participation, serving as a motivational foundation rather than the primary determinant of actual research participation. The current result aligns with previous research showing that teachers who demonstrate stronger confidence in conducting research tend to be more actively involved in producing research outputs and participating in research initiatives, as reported by Alcazaren and Jordan (2022).

The result also supports Gunter's (2021) assertion that higher self-efficacy increases teachers' confidence in applying new strategies and engaging in professional development activities, which in turn encourages research involvement. Similarly, the finding aligns with Gamilla and Edaño (2025), who provided empirical evidence that teachers' self-efficacy strongly influences their participation in action research. Overall, the current study strengthens and reinforces the authors' claims regarding the crucial roles of attitude toward research and research self-efficacy in promoting teachers' research engagement.

The findings of this study contradict those of Akujieze (2024), who reported that research attitude and research self-efficacy were not significantly associated with productivity among postgraduate students, suggesting that these factors may not consistently correspond directly with actual research activities.

The combined degree of influence of attitude toward research and research self-efficacy on research engagement is strong and significant.

This study found that attitude toward research and research self-efficacy together exert a strong, significant influence on research engagement. This finding supports Samosa's (2021) finding that teachers who demonstrated both high research self-efficacy and a positive attitude toward action research were actively involved in research activities, suggesting that these constructs work together to influence research behavior.

This finding reinforces Gleeson et al.'s (2023) finding that basic education teachers' research engagement was positively associated with both their research self-efficacy and attitude toward research, highlighting that confidence and favorable perceptions jointly motivate actual research participation. Similarly, these findings corroborate Cadiog's (2024) claim that research self-efficacy and perceived research value significantly influenced research engagement among librarians with master's degrees, supporting the strong combined influence found in this study.

In contrast, the present study's findings disprove the claim by Li and Xu (2024) that research self-efficacy and intrinsic motivation demonstrated minimal effect on participation in research activities among Chinese university EFL teachers, with extrinsic factors and institutional support showing stronger effects. This indicates that, at least among elementary teachers, attitude toward research and research self-efficacy play a significant role in promoting research engagement, contrary to their findings.

CONCLUSION

According to the results, the combined influence of attitude toward research and research self-efficacy on research engagement is significant. Hence, the Theory of Planned Behavior (TPB), which indicates that behavior is shaped by underlying intentions formed through attitudes, perceived behavioral control, and subjective norms, is partially supported.

RECOMMENDATIONS

Based on the conclusion, future regression studies may include the delimited factors of subjective norms and intention to account for the remaining 40.10% variance in research engagement among elementary teachers and further explore their influence. School administrators and institutional officials are encouraged to conduct a policy review, prioritize research-related policies, and develop incentive mechanisms to increase teachers' attitudes toward research. It is also recommended to enhance research program development by providing structured support, including mentoring and workshops that focus on practical, hands-on research training to build teachers' research self-efficacy. By enhancing attitude toward research and research self-efficacy, these strategies are likely to increase active engagement in research.

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