Teachers' Research Skills and Their Influence on Teaching Performance: A Correlational Study

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Abstract — This study examined the influence of teachers' research skills on their teaching performance in a secondary school in Cagayan, Philippines during the School Year 2025–2026. Specifically, it determined the level of teachers' research skills across selected dimensions, assessed their teaching performance based on their latest IPCRF ratings, and identified the relationship between these variables. The study employed a descriptive–correlational research design. A total of forty (40) teachers participated using total enumeration sampling. Data were gathered through a validated researcher-made questionnaire measuring research skills, while teaching performance data were obtained from IPCRF records. Findings revealed that teachers demonstrated an overall mean of 2.77, interpreted as competent in research skills. Most teachers exhibited competence in areas such as problem identification, literature review, data collection, technical writing, research utilization, and ethical practices, while they were less competent in research design and data analysis. In terms of teaching performance, the majority (95%) were rated outstanding, with only a small percentage achieving very satisfactory performance. Furthermore, a significant relationship was found between teachers' research skills and teaching performance ($r = 0.320$, $p = 0.043$), indicating that improved research skills are associated with better teaching outcomes. The study concludes that enhancing teachers' research competencies can contribute to improved instructional effectiveness. It is recommended that schools implement targeted training programs to strengthen teachers' skills in research design and data analysis to support evidence-based teaching practices.

Keywords: research skills, teaching performance, IPCRF, descriptive-correlational, secondary teachers

I. INTRODUCTION

The quality of education is largely influenced by the competence and performance of teachers, who play a vital role in facilitating meaningful learning experiences. In recent years, the expectations placed on teachers have expanded beyond traditional instruction to include active engagement in research activities. Teachers are now encouraged to develop research skills such as problem identification, data collection, analysis, and interpretation to support evidence-based teaching practices. These competencies enable educators to reflect on their instructional approaches, address classroom challenges, and continuously improve their teaching effectiveness. As educational systems increasingly emphasize innovation and data-driven decision-making, research skills have become an essential component of professional teaching standards, linking classroom practice with systematic inquiry.

In this context, the integration of research into teaching practice has become particularly relevant, as reflective and inquiry-based approaches are highly valued in modern education. Teachers who possess strong research skills are better equipped to evaluate their own practices and implement strategies that enhance student learning outcomes. Matjašič and Vogrinc (2024) emphasized that research competence is essential for teachers to contribute to knowledge generation and improve the quality of education. However, their study revealed that while teachers demonstrate adequate knowledge and skills in research, their actual research productivity remains low, indicating a gap between competence and application. This suggests that although teachers may possess foundational research skills, these are not always effectively translated into improved teaching practices.

Building on this, Comon and Corpuz (2024) found that teachers' research competence is significantly associated with their engagement in research activities, which in turn supports professional growth. Their findings highlight that teachers with higher levels of research competence are more motivated to conduct research and apply findings relevant to their teaching context. This underscores the role of research skills not only in professional development but also as a potential factor influencing instructional effectiveness. Thus, research competence may serve as a bridge between theoretical knowledge and practical classroom improvement.

On the other hand, studies focusing on teaching performance have identified various competencies that contribute to effective instruction. Canuto et al. (2024) examined teachers' competencies and found that domains such as pedagogy, classroom environment, and assessment significantly influence teaching performance. Their findings underscore that teacher competence is closely linked to performance outcomes, particularly in meeting professional standards. However, while these studies provide valuable insights into the determinants of teaching performance, they do not explicitly examine research skills as a distinct and contributing component of teacher competence.

Despite the growing body of literature on both research competence and teaching performance, a clear gap remains in understanding the direct relationship between these two variables. Existing studies tend to treat research competence as part of professional development or examine teaching performance in relation to general competencies, leaving limited empirical evidence on how research skills directly influence teaching effectiveness. This lack of integration highlights the need to explore the connection between teachers' research skills and their performance in the classroom.

Addressing this gap is essential for informing educational practice and policy. Understanding how research skills contribute to teaching effectiveness can guide the development of targeted professional development programs that integrate research training with instructional improvement. Moreover, it can provide valuable insights for school administrators and policymakers in designing initiatives that strengthen teacher competencies in alignment with current educational demands.

In view of these considerations, this study aimed to examine the influence of teachers' research skills on their teaching performance. Through this investigation, the study seeks to contribute to the existing body of knowledge and provide evidence-based recommendations for enhancing both research competence and instructional quality among teachers.

Literature Review

Teachers' research skills have become an essential component of professional competence in modern education, as they enable educators to adopt evidence-based practices and continuously improve instructional quality. Research competence involves the ability to identify problems, collect and analyze data, and apply findings to teaching practice. Valdiviezo-Villegas et al. (2023) emphasized that research competence is crucial in designing and evaluating teaching and learning activities, highlighting that educational practices should be grounded in systematic inquiry rather than intuition. This perspective reinforces the growing expectation for teachers to act as reflective practitioners who engage in continuous improvement through research.

Similarly, Arifin et al. (2022) stressed that the development of research knowledge and skills is a fundamental objective of teacher education programs. However, the study revealed that many teachers encounter challenges in acquiring and applying research skills effectively. This indicates that while research competence is widely recognized as important, its development remains an ongoing concern in teacher preparation and professional development.

Research competence is also considered a key dimension of overall teacher competence. Caena and Vuorikari (2022) highlighted that teacher competence frameworks increasingly include research-related skills as part of professional standards, particularly in promoting reflective and inquiry-based teaching. This suggests that research skills are not isolated competencies but are integrated with pedagogical and professional skills that contribute to teaching effectiveness.

Empirical studies further support the relevance of research skills in teaching practice. Ulla (2018) found that teachers who engage in research activities demonstrate improved instructional practices and greater professional growth. The study indicated that research engagement allows teachers to reflect on their teaching methods and implement more effective strategies in the classroom. Similarly, Srikham and Seehamongkon (2023) reported that teachers' research competence enhances their ability to address classroom challenges and develop innovative teaching approaches.

Despite these positive findings, several studies have identified challenges in the development and application of research skills. Borreo (2023) cited that teachers often demonstrate moderate levels of research competence but face difficulties in conducting research due to constraints such as limited time, lack of training, and insufficient institutional support. These findings suggest that while teachers may possess basic research knowledge, external factors may hinder the effective application of these skills.

In addition, Andoy and Paglinawan (2024) examined teachers' competencies in action research and found that many educators have only basic proficiency in technical aspects such as data analysis and research writing. This indicates that there is still a need for continuous professional development to strengthen teachers' research capabilities.

The importance of research skills is further emphasized in the context of digital and data-driven education. Basilotta-Gómez-Pablos et al. (2022) highlighted that digital research competencies are essential for teachers to effectively manage information and utilize technological tools in teaching. Likewise, Filderman et al. (2022) underscored the importance of data literacy, emphasizing that teachers must be able to interpret and use data to improve student learning outcomes. These studies suggest that research-related skills are increasingly important in modern educational environments.

Moreover, Bergmark (2023) noted that research competence enables teachers to engage in data-informed decision-making, allowing them to evaluate and refine their instructional strategies. This supports the idea that research skills contribute to more effective and responsive teaching practices.

In terms of teaching performance, Zamora and Zamora (2022) found that teacher competencies significantly influence instructional effectiveness, particularly in areas such as classroom management, assessment, and pedagogy. Their study emphasized that higher levels of competence are associated with better teaching performance, although research skills were not specifically examined as a separate variable.

Overall, the literature indicates that teachers' research skills play a vital role in professional development and instructional improvement. However, most studies, including those by Ulla (2018), focus on research engagement and competence without directly examining their impact on teaching performance. Similarly, studies on teaching performance, such as that of Zamora and Zamora (2022), do not explicitly consider research skills as a contributing factor. This highlights a gap in the literature and underscores the need for further investigation into the direct relationship between teachers' research skills and their teaching performance.

Research Questions

This study aimed to investigate the influence of teachers' research skills on their teaching performance in Cagayan, Philippines.

Specifically, this study sought to answer the following questions:

1. What is the level of teachers' research skills along the following dimensions?
    a. problem identification skills
    b. literature review skills
    c. research design skills
    d. data collection skills
    e. data analysis skills
    f. research utilization skills
    g. ethical research practices
2. What is the teachers' performance based on their latest IPCRF rating?
3. Is there a significant relationship between teachers' research skills and their teaching performance?

II. METHODOLOGY

Research Design

This study employed a descriptive–correlational research design to examine the level of teachers' research skills and their teaching performance, as well as to determine the relationship between these variables. The descriptive component was used to assess the extent of teachers' research skills across identified dimensions and their performance based on their latest IPCRF ratings, while the correlational component aimed to establish whether a significant relationship exists between teachers' research skills and their teaching performance. This design is appropriate as it allows the researcher to describe existing conditions and analyze the degree of association between variables without manipulating them.

Participants of the Study

The participants of this study consisted of forty (40) teachers from a secondary school in Cagayan, Philippines during the School Year 2025–2026. A total enumeration sampling technique was employed, wherein all teachers in the identified population were included as respondents in the study. This means that every member of the group was taken, ensuring complete coverage of the population. This approach allowed the researcher to obtain comprehensive and accurate data on teachers' research skills and teaching performance. Participation was treated with confidentiality throughout the study.

Instrumentation

This study utilized a researcher-made questionnaire as the primary data-gathering instrument to assess teachers' research skills. The instrument was developed based on the identified sub-dimensions, namely: problem identification skills, literature review skills, research design skills, data collection skills, data analysis skills, technical writing skills, research utilization skills, and ethical research practices. Each sub-dimension was represented by a set of statements rated using a Likert scale to determine the respondents' level of competence. The questionnaire was subjected to expert validation to ensure content validity and was pilot-tested to establish reliability before its administration. In addition, teachers' performance data were obtained from their latest IPCRF ratings to support the correlational analysis of the study.

Analysis of Data

The data gathered in this study were analyzed using both descriptive and inferential statistical methods. Descriptive statistics, specifically mean and standard deviation, were utilized to determine the level of teachers' research skills across the identified sub-dimensions, namely problem identification skills, literature review skills, research design skills, data collection skills, data analysis skills, technical writing skills, research utilization skills, and ethical research practices. These statistical measures were also used to describe the overall level of teachers' research skills and their teaching performance based on their latest IPCRF ratings. The following scale was used to interpret the mean scores of the respondents:

Range	Interpretation
1.00 – 1.74	Not Competent
1.75 – 2.49	Less Competent
2.50 – 3.24	Competent
3.25 – 4.00	Highly Competent

To determine the relationship between teachers' research skills and their teaching performance, the Pearson Product-Moment Correlation Coefficient (Pearson r) was employed. This statistical tool was used to assess the strength and direction of the relationship between the variables.

III. RESULTS AND DISCUSSION

Level of teachers' research skills along the following dimensions

The findings of the study revealed that teachers obtained an overall mean of 2.77, interpreted as "Competent" in terms of research skills. This indicates that, in general, teachers possess an acceptable level of ability in conducting research-related tasks. Across the different dimensions, teachers demonstrated competence in problem identification, particularly in recognizing classroom issues, although they were less competent in formulating clear research questions. In the literature review, teachers were able to search for relevant sources and cite them properly, but showed less competence in synthesizing information. The areas of research design and data analysis emerged as the weakest, as teachers were less competent in identifying variables,

formulating hypotheses, and analyzing data. In contrast, teachers showed competence in data collection, especially in administering tools and observing ethical practices. They were also competent in technical writing, as well as in research utilization, indicating their ability to apply findings to improve instruction. Moreover, ethical research practices were consistently demonstrated, reflecting adherence to proper research standards.

These findings imply that while teachers are generally competent in research, there remains a need to strengthen their skills in more technical and analytical aspects, particularly in research design and data analysis. Educational institutions may consider implementing targeted capacity-building programs such as training workshops, seminars, and mentoring to address these areas. Enhancing these competencies will enable teachers to conduct more rigorous and effective research, support the integration of evidence-based practices in teaching, and promote continuous professional development. Ultimately, improving teachers' research skills can contribute to better teaching performance and improved student learning outcomes.

Statements	Mean	Interpretation
Problem Identification Skills		
1. I can identify problems in my teaching that can be studied through research.	3.05	Competent
2. I can formulate clear and focused research questions based on classroom issues.	2.45	Less Competent
3. I can recognize gaps in my teaching practices that need improvement through research	2.90	Competent
Literature Review Skills		
4. I can search for relevant studies and references related to my research topic.	3.00	Competent
5. I can synthesize information from different sources effectively.	2.40	Less Competent
6. I can properly cite and acknowledge sources in my research work.	3.10	Competent

Research Design Skills		
7. I can select an appropriate research design for my study.	2.35	Less Competent
8. I can identify variables and formulate hypotheses when needed.	2.20	Less Competent
9. I can plan a clear and appropriate research methodology.	2.50	Competent
Data Collection Skills		
10. I can develop appropriate research instruments such as questionnaires or tests.	2.30	Less Competent
11. I can administer data collection tools properly.	2.85	Competent
12. I can ensure ethical practices such as confidentiality and informed consent during data collection.	3.15	Competent
Data Analysis Skills		
13. I can use basic statistical tools (e.g., mean, percentage) to analyze data.	2.15	Less Competent
14. I can interpret the results of my data analysis accurately.	2.35	Less Competent
15. I can present data clearly using tables, graphs, or charts.	2.75	Competent
Technical Writing Skills		
16. I can write research reports in a clear and organized manner.	2.85	Competent
17. I can structure my research paper according to the standard format.	2.95	Competent
18. I can use appropriate academic language in writing my research.	2.80	Competent

Research Utilization Skills		
19. I can apply research findings to improve my teaching practices.	3.05	Competent
20. I can integrate evidence-based strategies in my classroom instruction.	3.00	Competent
21. I can reflect on research outcomes to enhance student learning.	3.08	Competent
Ethical Research Practices		Competent
22. I can avoid plagiarism in all my research work.	3.20	Competent
23. I can properly acknowledge all sources of information.	3.10	Competent
24. I can follow ethical guidelines and institutional policies in conducting research.	3.05	Competent
Mean	**2.77**	**Competent**

Teachers' performance based on their latest IPCRF rating

The findings reveal that the majority of teachers demonstrated an "Outstanding" level of performance, with 38 out of 40 respondents (95%) falling within this category, while only 2 teachers (5%) were rated "Very Satisfactory" based on their latest IPCRF results. This indicates that most teachers exceed the expected standards in their professional duties and consistently exhibit high levels of teaching competence. The distribution suggests that teaching performance in the school is generally excellent, reflecting strong instructional effectiveness and professional commitment. Despite this high level of performance, there remains a need to sustain and further enhance these outcomes through continuous professional development, particularly in strengthening research skills, which may support teachers in maintaining excellence and further improving their instructional practices.

Teachers' Performance	Frequency	Percent
4.499 – 3.500 (Very Satisfactory	2	95.0
5.000 – 4.500 (Outstanding)	38	5.0
Total	40	100

Relationship between teachers' research skills and their teaching performance

The analysis revealed a significant relationship between teachers' research skills and their teaching performance ($r = 0.320$, $p = 0.043$), indicating a low but positive correlation. This result suggests that as teachers' research skills improve, their teaching performance also tends to increase. Although the strength of the relationship is modest, its statistical significance indicates that research skills play a meaningful role in enhancing teaching effectiveness. Teachers who demonstrate higher research competence are better positioned to reflect on their instructional practices, apply evidence-based strategies, and make informed decisions that improve classroom instruction.

To further examine the predictive influence of teachers' research skills on teaching performance, a simple linear regression analysis was conducted. The regression results showed that teachers' research skills significantly predicted teaching performance ($p = 0.043$). The coefficient of determination ($R^2 = 0.102$) indicates that approximately 10.2 percent of the variance in teaching performance can be explained by teachers' research skills. This finding suggests that while teaching performance is influenced by multiple factors, research competence contributes a statistically meaningful portion to variations in instructional performance.

The regression analysis supports the correlational findings by demonstrating that teachers' research skills are not only associated with teaching performance but also serve as a significant predictor of it. This implies that improvements in research skills may lead to corresponding improvements in teaching performance, even if the effect size is relatively small. The results highlight the importance of integrating research capacity-building initiatives into teacher professional development programs to strengthen instructional effectiveness.

These findings align closely with national teacher development priorities, particularly the Department of Education's professional development frameworks, which emphasize research engagement, reflective practice, and data-informed instruction as critical components of teacher quality. The Philippine Professional Standards for Teachers (PPST) underscore the role of teachers as reflective practitioners who use research and evidence to enhance teaching practices and learner outcomes. In this context, the significant regression results provide empirical support for strengthening research competencies as part of continuous professional development programs.

The present findings are further supported by related studies. Ulla (2018) reported that teachers' engagement in research leads to improved instructional practices and professional growth. Valdiviezo-Villegas et al. (2023) emphasized that research competence is essential in designing, implementing, and evaluating teaching and learning activities, while Bergmark (2023) highlighted that research competence enables teachers to engage in data-informed decision-making. Collectively, these studies corroborate the present results, confirming that research skills are a vital component of teaching performance and professional competence.

Variables	**Coefficient (r)**	**Regression R^2**	**Probability**	**Statistical Inference**
Teachers' Research Skills and Their Teaching Performance	0.320	0.102	0.043	**Significant**

*Tested using Pearson Correlation with Simple Linear Regression Analysis at 0.005 level of significance

IV. CONCLUSION

The study concluded that teachers are generally competent in research skills and demonstrate an outstanding level of teaching performance, with a significant relationship existing between the two variables. This indicates that research skills, even at a moderate level, contribute to the enhancement of teaching performance. The high level of teaching performance suggests that teachers consistently exceed expected standards in their professional duties. However, certain areas of research skills, particularly in research design and data analysis, still require further improvement. Therefore, strengthening teachers' research competencies through targeted professional development programs is essential to sustain and further enhance instructional practices. Enhancing these skills will enable teachers to become more reflective and evidence-based practitioners, ultimately supporting the maintenance of outstanding teaching performance and improving student learning outcomes.

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