



Research Skills of RCC Teachers: Implications for Research Skills Training Recommendations

Renz A. Camaya and Sharmaine D. Marcelo

Republic Central Colleges, Angeles City, Philippines

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ABSTRACT

Teachers' research skills are essential to evidence-based instruction, professional development, and continuous improvement in education. This study assessed the research skills of teachers in Republic Central Colleges and examined whether significant differences existed when they were grouped according to sex and highest educational attainment. Employing a quantitative descriptive-comparative research design, the study used total population sampling among 80 teachers from the elementary, high school, and tertiary departments, of whom 65 responded to the adopted questionnaire. The instrument assessed four dimensions of research skills: problem identification and conceptualization, information and evidence seeking, methodology and data analysis, and writing and reporting results. Descriptive statistics, the Mann–Whitney U test, and the Kruskal–Wallis H test were used to analyze the data. Results showed that the teachers were moderately skilled overall ($\bar{x}=3.41$). They were highly skilled in information and evidence seeking ($\bar{x}=3.60$) but moderately skilled in problem identification and conceptualization ($\bar{x}=3.40$), methodology and data analysis ($\bar{x}=3.29$), and writing and reporting results ($\bar{x}=3.37$). Significant differences were found in overall research skills and in three dimensions when grouped according to sex, while no significant difference was found in information and evidence seeking. Significant differences were also found across all research-skill dimensions according to highest educational attainment, with doctorate degree holders reporting the highest skill levels. The findings indicate the need for sustained research training, particularly in methodology, statistical analysis, and research reporting, supported by institutional mentoring and collaborative research opportunities.

Keywords: research skills, research training, teachers, research competence, professional development

INTRODUCTION

Teachers' research skills are widely recognized as central to teacher professionalism, continuous improvement, and better student outcomes. In the global perspectives, it has been emphasized that teachers who engage in research, whether action research, classroom inquiry, or collaborative study, strengthen their pedagogical practice, adapt to changing curricular demands, and translate evidence into classroom actions. In the Philippines, the Department of Education (DepEd) encourages teachers to conduct research as part of their Continuing Professional Development (CPD) and career advancement (DepEd, 2016). Teachers who engage in research show initiative, critical thinking, and commitment to lifelong learning, qualities that are valued in the Philippine Professional Standards for Teachers (PPST). With this ongoing and relevant trend towards research in the pedagogical realm, it is also highlighted that a majority of teachers are not into research. Some notable reasons are: workload, perceived difficulty, lack of resources, lack of support, and limited skills in conducting research (Hussein et al., 2019). Arguably, this caught the interest of the researchers to delve into the research skills of teachers which could be implications to research skills training recommendations. This research study would reveal areas where teachers excel and where they need improvement such as in formulating research problems, analyzing data, or writing reports. When teachers become aware of their own research skills through participation in or exposure to such studies, they are encouraged to reflect on their teaching practices and adopt a more inquiry-based mindset. Improved research skills enable teachers to conduct classroom-based research, where they systematically test new teaching strategies and evaluate their impact.

Importance of Research in Teaching

A primary rationale for teacher-led research is its direct link to classroom improvement. Teacher-led research enables teachers to design context-specific interventions, test them systematically, and adapt instruction based on evidence rather than intuition (Mertler, 2021). Reviews and empirical studies show that research can produce measurable improvements in teaching strategies and, in many cases, observable gains in student engagement and learning when interventions are well-designed and implemented.

Ventista and Brown (2023) stated that engaging teachers in research fosters continuous professional learning where it builds reflective practice, deepens pedagogical content knowledge, and contributes to teachers' sense of professional agency. Policy documents and studies argue that when research is part of professional development, it helps teachers move from passive recipients of "training" to active producers of knowledge, thereby aligning practice with standards of professional teaching. The Philippines' Basic Education Research Agenda (BERA) likewise frames teacher research as central to strengthening teacher competencies and improving basic education outcomes (DepEd, 2016).

Based on the report of DepEd (2016) regarding BERA, findings from teacher-led research and school-based studies provide locally relevant data that school leaders and policymakers can use for planning, resource allocation, and program design. National and division-level research agendas emphasize that evidence from classrooms should feed upward into school improvement plans and broader policy formulations which make teacher-led research an important link between practice and policy.

Teacher-led research serves as a vital tool for improving teaching practices and linking classroom experiences with educational policy. It enables teachers to design and test evidence-based interventions, fostering reflective practice, deeper pedagogical knowledge, and professional growth. In the Philippines, the Basic Education Research Agenda highlights its role in enhancing teacher competencies and providing data that inform school planning and policymaking. Overall, teacher research bridges the gap between classroom practice and policy, ensuring that educational improvements are grounded in real teaching and learning experiences.

Challenges Faced by Teachers in Research

Research, being a technical writeup which requires a rigorous process, poses challenges among teachers. In the study conducted by Hussein et al. (2019), when they surveyed 149 teachers in the Division of Iligan City, it was found that teachers' research activity is hindered by no knowledge on how to make a publishable paper, very large class size in the classroom, no access to research journals, no or poor internet in the school and poor support from the management.

Pregua (2024) stated in her study that one of the major concerns teachers face in conducting research is the difficulty of balancing research responsibilities with their personal and family life. She explained that the demanding workload of teaching often limits the time and energy teachers can devote to research, resulting in stress, fatigue, and diminished motivation. This imbalance not only affects teachers' productivity but also their overall well-being and enthusiasm for professional development. She emphasized that the lack of institutional support, such as insufficient time allocation, limited research incentives, and inadequate mentoring, further worsens this challenge. As a result, many teachers view research as an additional burden rather than an integral part of their profession.

Tingabngab and Binayao (2023) explored the various challenges encountered by teachers in Misamis Oriental as they engaged in research activities. Through a purposive sampling of sixteen participants, their study revealed a range of difficulties that hindered teachers' research productivity and confidence. Among these were struggles during the initial stages of conducting research, feelings of rejection, and the complexity of balancing multiple professional demands. The participants also experienced constraints related to prioritization, difficulties in identifying and applying relevant theoretical frameworks, and insufficient background knowledge of research theories. Moreover, many teachers reported a lack of skills in formulating research objectives, employing appropriate methods and techniques, and analyzing data effectively. They emphasized the need for capacity-building programs, mentorship, and institutional assistance to help teachers



strengthen their research competencies, boost confidence, and overcome barriers that limit their participation and success in educational research.

Teachers face various challenges in conducting research due to both personal and institutional factors. Heavy workloads, large class sizes, and limited time make it difficult for them to focus on research. Many also lack access to research materials, internet resources, and administrative support. Balancing research with personal and family responsibilities often leads to stress and low motivation. In addition, inadequate training, mentoring, and incentives result in weak research skills and low confidence. These challenges highlight the need for stronger institutional support and capacity-building programs to help teachers develop their research competence and actively contribute to educational improvement.

Research Skills among Teachers

Research skills among teachers are essential for enhancing instructional practices, encouraging innovation, and supporting evidence-based decision-making in education. In the Philippines, DepEd underscores the significance of research through the Basic Education Research Agenda (BERA), which motivates teachers to undertake studies focused on improving learning outcomes, teaching methods, and educational management (DepEd, 2016). Despite the recognized importance of research, however, teachers' competence and participation in research activities remain uneven, largely due to differences in their skills, confidence, and the level of institutional support provided.

Cortes et al. (2023) investigated the competence of basic education teachers in conducting action research and found that many teachers had average to low self-perceived competence in formulating research problems, designing methodologies, and analyzing data. This gap indicates a need for continuous training and capacity-building initiatives.

Hussien et al. (2019) identified that although teachers recognize the importance of research, they struggle with statistical analysis, proposal writing, and interpreting findings, largely due to insufficient training and mentorship. These findings suggest that while interest exists, technical proficiency in research remains underdeveloped.

Pregua (2022) also reported that teachers experience moderate difficulty in all stages of the research process, from identifying topics to presenting results. The study emphasized that these challenges stem from a lack of exposure to research during preservice education and limited opportunities for practice in professional settings.

Roallos (2024); Ulla et al. (2017) highlighted that teachers in public schools possess positive attitudes toward research but rarely engage in it because of heavy workloads, lack of financial support, and insufficient research mentoring. This suggests that the issue is not a lack of motivation but rather systemic barriers that hinder skill application.

Despite these challenges, initiatives to build teachers' research capacity are increasing. Programs such as the DepEd Research Management Guidelines (RMG, 2017) and local training workshops aim to improve research literacy among teachers. When properly implemented, these efforts not only improve teachers' technical research skills but also cultivate reflective, evidence-based teaching practices that directly benefit learners.

Research Gap and Future Directions

Research is important because it helps teachers improve their teaching methods and link classroom practices to educational goals and policies. Through research, teachers can make informed decisions, enhance their strategies, and reflect on their professional growth. However, many teachers find it difficult to engage in research due to their busy schedules, lack of time, limited access to resources, and minimal school support. Others also face challenges in writing proposals, analyzing data, and completing research projects because of limited training and experience. Although there are programs that aim to strengthen teachers' research abilities, more focused support and hands-on learning opportunities are still needed. Therefore, it is important to conduct a study that examines teachers' research skills and the challenges they face to create programs that

will help them become more capable and confident researchers. This study focuses on the understanding of teachers' research skills as bases for research skills training recommendations.

Conceptual Framework

Figure 1 Teachers' Profile and their Research Skills

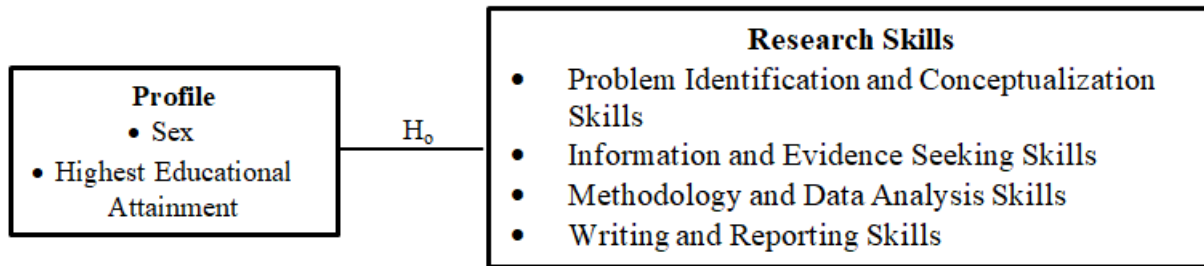


Figure 1 presents this study's conceptual paradigm, illustrating the variables of the study which are the respondents' profile and their research skills. The study aims to determine whether there is a difference in the teachers' research skills when grouped according to their profile variables.

The first variable, the profile of the respondents, includes sex and highest educational attainment. Sex refers to the respondents' biological classification as male or female, while highest educational attainment pertains to their level of education, whether they are bachelor's degree holders, have completed a master's degree, or have obtained a doctorate degree.

The second variable focuses on the respondents' research skills, which covers four core skills: (1) Problem Identification and Conceptualization Skills; (2) Information and Evidence Seeking Skills; (3) Methodology and Data Analysis Skills; and (4) Writing and Reporting Skills. These dimensions collectively reflect the teachers' capability to engage in systematic research activities.

The hypothesized difference is represented by the line connecting the variables, as shown in Figure 1. This both supports and contradicts studies that claim there is a significant difference in the respondents' research skills when grouped according to their profile.

Hypothesis

H_0 : There is no significant difference in the respondents' research skills when grouped according to their profile.

Statement of the Problem

This study aimed to describe the research skills of the teachers and to compare these variables based on their profile.

Specifically, this study sought to answer the following:

1. What is the profile of the respondents in terms of:
 - 1.1. sex; and
 - 1.2. highest educational attainment?
2. What is the respondents' research skills in terms of:
 - 2.1. problem identification and conceptualization skills;
 - 2.2. information and evidence seeking skills;



2.3. methodology and data analysis skills; and

2.4. writing and reporting skills?

3. Is there a significant difference in the respondents' research skills when grouped according to their profile?

Significance of the Study

This study is important as it focuses on understanding teachers' research skills, which are essential for enhancing teaching practices and promoting evidence-based instruction. Although research helps teachers evaluate and improve their methods, many still lack the necessary skills and confidence to conduct meaningful studies. By assessing teachers' current level of research skills, this study aims to identify specific areas where they need support, such as problem identification and conceptualization skills, information and evidence seeking skills, methodology and data analysis skills, and writing and reporting skills. The results will serve as a basis for creating effective training programs and mentoring opportunities that strengthen teachers' research skills. Strengthening these skills will not only help teachers become more reflective and innovative in their teaching but also encourage a stronger culture of research within the school. Ultimately, the study seeks to empower teachers to use research as a tool for continuous professional growth and for improving educational outcomes.

Scope and Delimitation

This study focuses on assessing the level of research skills of teachers in Republic Central Colleges from elementary, high school, and college departments. The study is within the key research skills areas such as problem identification and conceptualization skills, information and evidence seeking skills, methodology and data analysis skills, and writing and reporting skills. The respondents' research skills are tested by their difference with the respondents' profile variables such as sex and highest educational attainment.

METHODS

Research Design

This quantitative study employed the descriptive-comparative research design. Villaabrielle et al. (2024) mentioned that descriptive-comparative research design has a purpose of observing and describing the differences between different groups in a population without intentionally changing any factors. Thus, this type of research design is suitable to attain the study's objective which is to describe and compare the teachers' research skills when grouped according to their profile.

Sampling Technique

The researchers applied the total population sampling technique. According to Thomas (2022), total enumeration technique is a type of purposive sampling wherein the entire population possessing a specific set of characteristics is included in the study. This method is typically used when the target population is small and well-defined, making it feasible to involve all its members. Given that the target population in this study was limited to 80 teachers, the researchers deemed this approach appropriate to ensure that all teachers were given an opportunity to participate. However, only 65 out of 80 teachers responded to the survey questionnaire, yielding a response rate of 81.25%. The researchers treated the 65 respondents as the actual sample for analysis.

Respondents

The respondents of this study were the teachers from one of the private schools in Angeles City, Philippines, during the Academic Year 2025-2026. A total of 65 out of 80 teachers took part in this study, coming from the elementary, high school, and tertiary levels.

Instrument

The instrument used in this study was composed of two (2) sections. The first section gathered the respondents' profile, which included their sex and highest educational attainment. The second section was an adopted questionnaire from Hero (2023) designed to assess the teachers' research skills. This section was divided into four (4) parts corresponding to the core competencies in research writing, namely: Part A-Problem Identification and Conceptualization Skills with 12 items; Part B-Information and Evidence Seeking Skills with 11 items; Part C-Methodology and Data Analysis Skills with 16 items; and Part D-Writing and Reporting the Results Skills with 7 items. Responses were rated using a five-point Likert scale, where 1 indicates Not Skilled, 2 Least Skilled, 3 Moderately Skilled, 4 Highly Skilled, and 5 Very Highly Skilled.

The research instrument demonstrated high reliability, with Cronbach's Alpha values ranging from 0.90 to 0.95, indicating excellent internal consistency. According to Hero (2023), the questionnaire underwent local validation to ensure its applicability within the study context, and no modifications were made after the validation process. Furthermore, the present researchers ensured that the instrument also underwent face and content validation prior to its administration to confirm its appropriateness and relevance to the target respondents.

Data Gathering Procedure and Ethical Considerations

Prior to data collection, the researchers sought permission from the tool owner to use the adopted research instrument. Approval to conduct the study was also obtained from the School President, Vice President for Academic Affairs, Deans from different colleges, and High School Principal. After securing the necessary permissions, the questionnaire was converted into Google Forms and were distributed through the respondents' Facebook or GSuite accounts. Before answering the questionnaire, informed consent forms were provided to ensure that respondents voluntarily participated and fully understood the study's purpose and procedures. Once all responses were retrieved, the researchers tallied and organized the data, which served as the basis for statistical analysis in addressing the research objectives.

Data Analysis

The data gathered from the responses of the respondents were encoded using Microsoft Excel 2019 ed. and were analyzed using the Licensed SPSS version 25 to provide answers to the questions included in the statement of the problem. The researchers ensured that the data were properly encoded by subjecting them to data cleaning using frequency distribution.

To describe the respondents' profile (sex and highest educational attainment), frequency (f) and percentage (%) were used.

The frequency (f), percentage (%), and mean ($\bar{x}$) distribution was used in describing the respondents' research skills with the $\bar{x}$ range, description/ interpretation as follows:

$\bar{x}$ Range	Description/ Interpretation
4.50-5.00	Very Highly Skilled
3.50-4.49	Highly Skilled
2.50-3.49	Moderately Skilled
1.50-2.49	Least Skilled
1.00-1.49	Not Skilled

Finally, to test the difference in the respondents' research skills when grouped according to sex and highest educational attainment, the researchers used Mann Whitney U test and Kruskal-Wallis H Test, respectively. A p-value less than or equal to 0.05 means that there is a significant difference in the respondents' research skills based on their profile.

Ethical Considerations

The researchers strictly observed ethical norms throughout the study. Informed consent was obtained from all respondents to ensure voluntary participation and full awareness of the study's purpose, benefits, and possible risks. The researchers remained open to any comments, clarifications, or concerns raised by the respondents during the conduct of the study and ensured that no participant was subjected to harm. Moreover, confidentiality of information was maintained in compliance with the Data Privacy Act of 2012 (Republic Act No. 10173). Proper acknowledgment and citation were also observed by the researchers to uphold academic integrity and give due credit to the original authors of referenced works. The researchers also declare the use of AI in the writing process such as Grammarly during the writing of this work to enhance the structure and readability of this paper while maintaining the content's originality and integrity. After utilizing the tool/service, the researchers thoroughly reviewed and edited the content as necessary and assumed full responsibility for the publication's content.

RESULTS AND DISCUSSION

The data collected from this study's tool were organized and analyzed using the appropriate statistical tools which revealed the following significant findings:

Teachers' Profile

Table 1 presents the profile of the respondents. In terms of sex, the majority were female, with 37 respondents (56.9%), while male teachers comprised 28 respondents (43.1%). Regarding highest educational attainment, most teachers held a Bachelor's degree, with 41 respondents (63.1%), followed by those with a Master's degree, with 17 respondents (26.2%), and those with a Doctorate degree, with 7 respondents (10.8%). Thus, female teachers slightly outnumbered male teachers in the sample, while the majority of the respondents had attained at least a bachelor's degree, with a considerable proportion having pursued postgraduate education.

The predominance of female teachers in the sample is consistent with the gender composition of the teaching profession in the Philippines. The Second Congressional Commission on Education (EDCOM 2, 2025) reported that females comprised 59.22% of the teaching personnel in higher education institutions. Similarly, Pablo et al. (2025) reported that approximately 60% of public school teachers in the Philippines are female. These figures provide contextual support for the relatively higher representation of female respondents in the present study. However, the distribution of respondents by sex should be interpreted primarily as a description of the sample rather than as an indication of differences in teachers' skills or capabilities.

This distinction is particularly important when interpreting findings based on self-assessment. Research on gender and self-assessment has noted that men and women may differ in how they perceive and report their own abilities, including in domains such as mathematics and academic performance. Consequently, if male teachers obtain higher self-assessed skill ratings than female teachers, such differences should not be interpreted as evidence that male teachers objectively possess higher levels of skill. Rather, the findings may reflect differences in self-perception, confidence, or response patterns alongside possible differences in actual competence. Shaw and Cassell (2007) likewise discussed gendered patterns in academic roles and research-related work, highlighting the importance of considering gender when interpreting participation and self-reported experiences in academic contexts.

For future research, the relationship between sex and teachers' skills may therefore be examined using measures that complement self-reported assessments, such as performance-based assessments, standardized knowledge tests, classroom observations, teaching demonstrations, or evaluations using validated competency-based instruments. Using such objective or externally assessed measures may help determine whether observed differences in self-assessed skills correspond to differences in demonstrated competence.

In terms of educational attainment, the respondents were generally well educated, with some having pursued postgraduate degrees. This profile is also consistent with the increasing participation of teachers in graduate education in the Philippines. EDCOM 2 (2025) reported that 44.80% of teachers were master's degree holders

and 29.44% were doctorate degree holders. These figures provide a broader context for understanding the educational profile of the respondents and suggest the continuing importance of postgraduate education in the professional development of teachers. Nevertheless, the educational attainment of the present respondents should be interpreted descriptively and should not, by itself, be taken as evidence of differences in teaching competence or research-related skills.

Table 1 Teachers' Profile

Sex	f	%
Female	37	56.9
Male	28	43.1
Total	65	100
Highest Educational Attainment	f	%
Bachelor's Degree	41	63.1
Doctorate Degree	7	10.8
Master's Degree	17	26.2
Total	65	100

Teachers' Research Skills

Table 2 shows the teachers' research skills in terms of problem identification and conceptualization skills, information and evidence seeking skills, methodology and data analysis skills, and writing and reporting skills.

Problem Identification and Conceptualization Skills. The teachers' self-assessed research skills in terms of problem identification and conceptualization were presented with mean scores ranged from 3.25 to 3.57. Three statements were rated as Highly Skilled: "Connect the research to real-world issues and propose pragmatic solutions to address the identified research gap" with a mean of 3.51, "Provide a justification for conducting the research, explaining its significance" with a mean of 3.51, and "Specify the scope and delimitations of the research" with the highest mean of 3.57. The lowest rated statement was "Create a mind map or concept map of the research topic or problem" with a mean of 3.25, though still within the Moderately Skilled range. This means that teachers feel most confident in justifying their research, connecting it to real-world problems, and defining its boundaries. However, they feel least confident in using visual tools like mind maps to organize their research ideas. Overall, the subtotal mean of 3.40 indicates that teachers generally rated themselves as moderately skilled across all twelve indicators. While teachers possess solid foundational skills in identifying and conceptualizing research problems, there is room for improvement in more creative or visual brainstorming techniques. Truong et al. (2023) mentioned that the conceptualization phase in conducting research is one of the difficult parts yet researchers are found to be skilled in doing it. Basically, researchers are skilled in this phase as they identify plausible problems within their parameters and they take them as research problems. Additionally, Hero (2023) stated in his study that teachers are moderately skilled in terms of topic formulation and conceptualization. This agrees that teachers are capable of formulating and conceptualizing research topics within their area of interest.

Information and Evidence Seeking Skills. The teachers' self-assessed research skills in terms of information and evidence seeking have the mean scores ranging from 3.40 to 3.78. The highest rated statement was "Gather information about my research topic through various means (e.g., electronic media, images, audio and video)" with a mean of 3.78 (Highly Skilled), while the lowest rated statement was "When searching for information, I can arrange each item systematically and thematically depending on the nature of reviewing the

literature and studies" with a mean of 3.40 (Moderately Skilled). This means that teachers feel most confident in gathering information from various sources but feel less confident in organizing information systematically. Overall, the subtotal mean of 3.60 indicates that teachers generally rated themselves as highly skilled in information and evidence seeking. Badiang (2026) stipulated in her study that most of the time, teachers are taking it very easy to locate and gather information from the internet due to its vast content and information. However, the problem exists when they organize the information in a research-based way of writing. This only means that many teachers are facing difficulties in the organization of ideas following the research format and technicalities of writing a research paper.

Methodology and Data Analysis Skills. The teachers' self-assessed research skills in terms of methodology and data analysis have the mean scores ranged from 2.85 to 3.72. The highest rated statement was "Observe and collect necessary data" with a mean of 3.72 (Highly Skilled), while the lowest rated statement was "Perform common statistical tools in any statistical applications like MS Excel, SPSS, JASP, or other apps" with a mean of 2.85 (Moderately Skilled). This means that teachers feel most confident in observing and collecting data but feel least confident in using statistical software applications for analysis. Overall, the subtotal mean of 3.29 indicates that teachers generally rated themselves as moderately skilled across all sixteen indicators in methodology and data analysis. These agree to what Hero (2023) stated in his study that teachers, especially those who did not take Statistics, face crucial moments in methodology and data analysis. As data analysis requires one to be knowledgeable about statistical tools and data treatments, a teacher should undergo training and actual workshop for data analysis to master the process. This only means that teachers must enroll to a statistics class or workshop, pursue higher education or attend training that covers statistical tools and data treatments.

Writing and Reporting the Results Skills. The teachers' self-assessed research skills in terms of methodology and data analysis have the mean scores ranged from 3.32 to 3.43. The highest rated statement was "Communicate research results clearly" with a mean of 3.43 (Moderately Skilled), while the lowest rated statement was "Prepare grammatically and syntactically correct content for presentations" with a mean of 3.32 (Moderately Skilled). This means that teachers feel most confident in clearly communicating their research findings, while they feel least confident in preparing grammatically and syntactically correct content for presentations. Overall, the subtotal mean of 3.37 indicates that teachers generally rated themselves as moderately skilled across all seven indicators in writing and reporting research results. Badiang (2026) stated that teachers find it easy to present findings in the research paper due to the given format and templated way of writing. This only shows that teachers are effective writers as long as the format is given as they basis. On the other hand, Cortes et al. (2023) mentioned that many teachers, particularly non-language teachers, are committing mistakes and write ungrammatical statements in writing. This only means that grammar checking tools should be used in writing to help teachers make their write-ups clear and grammatically correct.

Overall, teachers' self-assessed research skills across the four dimensions (Problem Identification and Conceptualization, Information and Evidence Seeking, Methodology and Data Analysis, and Writing and Reporting Results) yielded an overall mean of 3.41, which is described and interpreted as Moderately Skilled. This indicates that teachers generally perceive themselves as moderately skilled in research. While they demonstrated higher confidence in information and evidence seeking (subtotal mean of 3.60 - Highly Skilled), their lowest confidence was in methodology and data analysis (subtotal mean of 3.29 - Moderately Skilled). This suggests that teachers need further training and support particularly in research methodology, statistical analysis, and the use of statistical software to enhance their overall research competence.

Table 2 Teachers' Research Skills

Problem Identification and Conceptualization Skills	Not Skilled	Least Skilled	Moderately Skilled	Highly Skilled	Very Highly Skilled	$\bar{x}$	Desc.
1. Create a mind map or concept map of the research topic or	3	6	32	20	4	3.25	Moderately Skilled



problem.	(4.6%)	(9.2%)	(49.2%)	(30.8%)	(6.2%)		
2. Connect the research to real-world issues and propose pragmatic solutions to address the identified research gap.	2 (3.1%)	6 (9.2%)	22 (33.8%)	27 (41.5%)	8 (12.3%)	3.51	Highly Skilled
3. Formulate the research topic or problem based on existing literature and other relevant sources.	2 (3.1%)	8 (12.3%)	21 (32.3%)	26 (40.0%)	8 (12.3%)	3.46	Moderately Skilled
4. Frame questions or problems as opportunities for research exploration.	2 (3.1%)	7 (10.8%)	26 (40.0%)	23 (35.4%)	7 (10.8%)	3.40	Moderately Skilled
5. Pose meaningful and challenging questions—always guided by curiosity.	2 (3.1%)	5 (7.7%)	29 (44.6%)	24 (36.9%)	5 (7.7%)	3.38	Moderately Skilled
6. Craft a clear and precise research title.	2 (3.1%)	11 (16.9%)	26 (40.0%)	20 (30.8%)	6 (9.2%)	3.26	Moderately Skilled
7. Provide a justification for conducting the research, explaining its significance.	2 (3.1%)	6 (9.2%)	24 (36.9%)	23 (35.4%)	10 (15.4%)	3.51	Highly Skilled
8. Develop a conceptual framework for the research.	2 (3.1%)	10 (15.4%)	26 (40.0%)	20 (30.8%)	7 (10.8%)	3.31	Moderately Skilled
9. Derive specific research questions from the topic or problem.	2 (3.1%)	8 (12.3%)	21 (32.2%)	27 (41.5%)	7 (10.8%)	3.45	Moderately Skilled
10. Formulate research hypotheses, where applicable.	2 (3.1%)	10 (15.4%)	25 (38.5%)	20 (30.8%)	8 (12.3%)	3.34	Moderately Skilled
11. Define and elaborate on the key variables involved in the study.	2 (3.1%)	10 (15.4%)	21 (32.3%)	23 (35.4%)	9 (13.8%)	3.42	Moderately Skilled
12. Specify the scope and delimitations of the research.	2 (3.1%)	6 (9.2%)	21 (32.3%)	25 (38.5%)	11 (16.9%)	3.57	Highly Skilled
Subtotal						3.40	Moderately Skilled



Information and Evidence Seeking Skills	Not Skilled	Least Skilled	Moderately Skilled	Highly Skilled	Very Highly Skilled	$\bar{x}$	Desc.
1. Gather information about my research topic through various means (e.g., electronic media, images, audio and video).	2 (3.1%)	3 (4.6%)	16 (24.6%)	30 (46.2%)	14 (21.5%)	3.78	Highly Skilled
2. Identify and access appropriate bibliographical resources, archives and other sources of relevant information (* including web-based resources, primary sources and repositories).	2 (3.1%)	6 (9.2%)	20 (30.8%)	29 (44.6%)	8 (12.3%)	3.54	Highly Skilled
3. Assess the reliability, reputation, currency, authority and relevance of sources.	2 (3.1%)	5 (7.7%)	20 (30.8%)	29 (44.6%)	9 (13.8%)	3.58	Highly Skilled
4. Evaluate the accurateness of the content by reading other sources mentioned by the writer/author.	2 (3.1%)	5 (7.7%)	19 (29.2%)	30 (46.2%)	9 (13.8%)	3.60	Highly Skilled
5. When searching for information, I can arrange each item systematically and thematically depends to the nature of reviewing the literature and studies.	2 (3.1%)	6 (9.2%)	27 (41.5%)	24 (36.9%)	6 (9.2%)	3.40	Moderately Skilled
6. Use the main ideas obtained from the information researched to support my topic.	2 (3.1%)	5 (7.7%)	17 (26.2%)	33 (50.8%)	8 (12.3%)	3.62	Highly Skilled
7. Combine the main ideas from one source or more to form a new idea.	2 (3.1%)	6 (9.2%)	21 (32.3%)	29 (44.6%)	7 (10.8%)	3.51	Highly Skilled
8. Observe and collect necessary data that can	2	3	18	35	7	3.65	Highly Skilled



support my problem.	(3.1%)	(4.6%)	(27.7%)	(53.8%)	(10.8%)		
9. Write down the important concepts myself using my own words to support my topic	2 (3.1%)	9 (13.8%)	15 (23.1%)	33 (50.8%)	6 (9.2%)	3.49	Moderately Skilled
10. Write my references in any citation and referencing formats or styles or have a wide understanding about the use of APA format as the style of citation and referencing.	2 (3.1%)	4 (6.2%)	16 (24.6%)	32 (49.2%)	11 (16.9%)	3.71	Highly Skilled
11. Follow ethical standards in writing related literature.	3 (4.6%)	3 (4.6%)	18 (27.7%)	29 (44.6%)	12 (18.5%)	3.68	Highly Skilled
Subtotal						3.60	Highly Skilled
Methodology and Data Analysis Skills	Not Skilled	Least Skilled	Moderately Skilled	Highly Skilled	Very Highly Skilled	$\bar{x}$	Desc.
1. Plan and design the research process of a research topic.	4 (6.2%)	9 (13.8%)	27 (41.5%)	21 (32.3%)	4 (6.2%)	3.18	Moderately Skilled
2. Have a wide and broad understanding about the different methodology and design in research writing.	4 (6.2%)	8 (12.3%)	31 (47.7%)	20 (30.8%)	2 (3.1%)	3.12	Moderately Skilled
3. Determine the appropriate research design or method of my research.	2 (3.1%)	9 (13.8%)	29 (44.6%)	21 (32.3%)	4 (6.2%)	3.25	Moderately Skilled
4. Understand relevant research methodologies and techniques and their appropriate application within own research area.	3 (4.6%)	9 (13.8%)	24 (36.9%)	24 (36.9%)	5 (7.7%)	3.29	Moderately Skilled
5. Justify the principles and experimental techniques used in own research.	3 (4.6%)	10 (15.4%)	28 (43.1%)	22 (33.8%)	2 (3.1%)	3.15	Moderately Skilled



6. Determine appropriate respondents and number of respondents necessary for my research.	2 (3.1%)	5 (7.7%)	20 (30.8%)	30 (46.2%)	8 (12.3%)	3.57	Highly Skilled
7. Select or develop a research instrument to gather necessary data for my research.	2 (3.1%)	10 (15.4%)	28 (43.1%)	20 (30.8%)	5 (7.7%)	3.25	Moderately Skilled
8. Have basic understanding of legal requirements surrounding research, e.g., Data Protection Act, Freedom of Information Act.	2 (3.1%)	5 (7.7%)	23 (35.4%)	23 (35.4%)	12 (18.5%)	3.58	Highly Skilled
9. Understand and apply the relevant codes of conduct and guidelines for the ethical conduct of research; seeks advice from supervisor.	2 (3.1%)	6 (9.2%)	22 (33.8%)	25 (38.5%)	10 (15.4%)	3.54	Highly Skilled
10. Observe and collect necessary data.	2 (3.1%)	5 (7.7%)	17 26.2%)	26 (40.0%)	15 (23.1%)	3.72	Highly Skilled
11. Determine which statistical tool or method analysis to use for my research.	2 (3.1%)	9 (13.8%)	30 (46.2%)	20 (30.8%)	4 (6.2%)	3.23	Moderately Skilled
12. Perform common statistical tools in any statistical applications like MS Excel, SPSS, JASPS, or others app.	6 (9.2%)	16 (24.6%)	29 (44.6%)	10 (15.4%)	4 (6.2%)	2.85	Moderately Skilled
13. Analyze and interpret the results of my statistical treatment or method analysis.	6 (9.2%)	12 (18.5%)	28 (43.1%)	15 (23.1%)	4 (6.2%)	2.98	Moderately Skilled
14. Evaluate and systematically organize the data I have gathered.	4 (6.2%)	9 (13.8%)	27 (41.5%)	21 (32.3%)	4 (6.2%)	3.18	Moderately Skilled
15. Draw conclusions from patterns and themes gathered from the data.	3 (4.6%)	7 (10.8%)	25 (38.5%)	23 (35.4%)	7 (10.8%)	3.37	Moderately Skilled



16. Organize and interpret data using tables and graphs.	5 (7.7%)	9 (13.8%)	18 (27.7%)	22 (33.8%)	11 (16.9%)	3.38	Moderately Skilled
Subtotal						3.29	Moderately Skilled
Writing and Reporting the Results Skills	Not Skilled	Least Skilled	Moderately Skilled	Highly Skilled	Very Highly Skilled	$\bar{x}$	Desc.
1. Have a knowledge of language(s) appropriate for research, including technical language	4 (6.2%)	6 (9.2%)	24 (36.9%)	23 (35.4%)	8 (12.3%)	3.38	Moderately Skilled
2. Understand, interpret, create, and communicate appropriately within an academic context.	2 (3.1%)	11 (16.9%)	20 (30.8%)	27 (41.5%)	5 (7.7%)	3.34	Moderately Skilled
3. Prepare grammatically and syntactically correct content for presentations.	4 (6.2%)	7 (10.8%)	24 (36.9%)	24 (36.9%)	6 (9.2%)	3.32	Moderately Skilled
4. Communicate research results clearly.	2(3.1%)	9(13.8%)	21(32.3%)	25(38.5%)	8(12.3%)	3.43	Moderately Skilled
5. Construct my thesis statement clearly.	3 (4.6%)	7 (10.8%)	24 (36.9%)	24 (36.9%)	7 (10.8%)	3.38	Moderately Skilled
6. Organize my thoughts and ideas clearly and prepare a manuscript of my research	3 (4.6%)	8 (12.3%)	26 (40.0%)	21 (32.3%)	7 (10.8%)	3.32	Moderately Skilled
7. Communicate orally the results of my research process.	3 (4.6%)	7 (10.8%)	24 (36.9%)	24 (36.9%)	7 (10.8%)	3.38	Moderately Skilled
Subtotal						3.37	Moderately Skilled
Overall						3.41	Moderately Skilled

Difference in the Teachers' Research Skills when grouped according to Profile

Table 3 reveals the difference in teachers' research skills when grouped according to their profile (sex and highest educational attainment).

In terms of **sex**, male teachers consistently rated their research skills higher than female teachers across all four dimensions. Significant differences were found in three dimensions and the overall score with p-values lower than 0.05, leading to the rejection of the null hypothesis. However, no significant difference was found in



Information and Evidence Seeking Skills ($p=0.074$; Male=37.8, Female=29.36), indicating that both male and female teachers perceived themselves similarly in this dimension.

In contrast, significant differences were observed in three dimensions and the overall score, with p -values lower than 0.05 leading to the rejection of the null hypothesis. Specifically, significant differences were found in Problem Identification and Conceptualization ($p=0.028$; Male=38.91, Female=28.53), Methodology and Data Analysis ($p=0.029$; Male=38.89, Female=28.54), Writing and Reporting Results ($p=0.009$; Male=39.98, Female=27.72), and Overall research skills ($p=0.017$; Male=39.45, Female=28.12). These findings suggest that male teachers rated themselves significantly higher than female teachers in most research skill dimensions, except in information and evidence seeking where both groups were comparable.

In terms of **highest educational attainment**, significant differences were found across all dimensions and the overall score, with p -values ranging from 0.006 to 0.013, all below the 0.05 significance level, leading to a decision to reject the null hypothesis in each case. This indicates that there are significant differences in research skills among teachers with Bachelor's, Master's, and Doctorate degrees. Across all dimensions, teachers with Doctorate degrees consistently had the highest mean scores (ranging from 51.43 to 52.29), followed by those with Master's degrees (ranging from 34.18 to 36.71), while those with Bachelor's degrees had the lowest (ranging from 28.32 to 29.23). This suggests that higher educational attainment is associated with higher self-assessed research skills. Teachers with Doctorate degrees rated themselves as significantly more skilled in research compared to those with Master's or Bachelor's degrees.

Table 3 Difference in the Teachers' Research Skills when grouped according to Profile

Teachers' Research Skills	Sex		p-value	Decision
	Male	Female		
Problem Identification and Conceptualization Skills	38.91	28.53	0.028	Reject H_0
Information and Evidence Seeking Skills	37.8	29.36	0.074	Failed to reject the H_0
Methodology and Data Analysis Skills	38.89	28.54	0.029	Reject H_0
Writing and Reporting the Results Skills	39.98	27.72	0.009	Reject H_0
Overall	39.45	28.12	0.017	Reject H_0

Teachers' Research Skills	Highest Educational Attainment			p-value	Decision
	Bachelor's Degree	Master's Degree	Doctorate Degree		
Problem Identification and Conceptualization Skills	28.99	35.09	51.43	0.013	Reject H_0
Information and Evidence Seeking Skills	29.23	34.18	52.21	0.011	Reject H_0
Methodology and Data Analysis Skills	28.32	36.71	51.43	0.007	Reject H_0
Writing and Reporting the Results Skills	28.61	35.94	51.57	0.009	Reject H_0
Overall	28.40	36.15	52.29	0.006	Reject H_0

CONCLUSIONS AND RECOMMENDATIONS

The research skills of the teachers is a topic that requires attention as it directly impacts the quality of instruction and professional development in an institution. Based on the findings of the study, the following conclusions are drawn:

- The teacher-respondents were predominantly female and mostly held Bachelor's degrees, with fewer having Master's or Doctoral degrees.
- Teachers demonstrated moderately skilled research abilities overall. They were highly skilled in information and evidence seeking but only moderately skilled in problem identification and conceptualization, methodology and data analysis, and writing and reporting results.
- Significant differences were found when teachers were grouped according to their profile. Male teachers rated their research skills higher than female teachers across most dimensions. Likewise, higher educational attainment was associated with higher self-assessed research skills, with Doctoral degree holders rating themselves highest.

In line with the study's results and discussion, the following actions are therefore recommended:

- Teachers should actively participate in research training seminars and workshops, particularly in methodology and data analysis, to improve their skills in using statistical software and interpreting results. They should also engage in collaborative research projects with colleagues who have advanced research experience, especially those with Master's or Doctoral degrees.
- School administrators should organize regular in-service training programs focused on research methodology, statistical analysis, and the use of statistical tools such as SPSS, JASP, or MS Excel. Mentorship programs pairing less experienced teachers with those holding Doctoral or Master's degrees may also help build research competence across all faculty members.
- Future studies should explore the actual research productivity of teachers like the number of completed researches, published articles, or presentations. Qualitative studies may also be conducted to understand the specific challenges teachers face in doing research.

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