

# Research writing capabilities of master teachers: Basis for capability enhancement plan

<sup>1</sup>Mary Roselene M. Repolito & <sup>2</sup>Manuel O. Maloniso

## Abstract

Amid growing calls for evidence-based practices in education, the research capabilities of master teachers in basic education remain underexplored. This study addressed the persistent gap in research productivity by assessing their research capability and identifying predictive factors, with the aim of informing a capability enhancement plan for the Department of Education. The study employed an embedded mixed-methods approach in gathering the necessary data. Quantitative data analysis using various statistical tests revealed that master teachers are capable in the following research capability dimensions: technical skills, conceptualizing research problems, and writing the methodology. However, in terms of research data processing and interpretation, they were assessed as only moderately capable. This suggests that the research capability of master teachers is relatively low, which may explain the lack of progressive research productivity. A correlation was found between research capability and the following variables: educational attainment, research output, and mentorship. Qualitative data gathered through focus group discussions generated four themes reflecting the challenges faced by master teachers in conducting research: “knowledge and skill are accrual” (insufficient knowledge and skills); “input to training, output to efficiency” (inadequate training); “time is an element” (time constraints); and “support is an extra mile” (lack of financial and moral support). The results provide a general implication that for any research capability enhancement plan to succeed, the Department of Education must emphasize knowledge, training, and institutional support as essential drivers of research productivity.

**Keywords:** *research capability, master teachers, research capability enhancement plan*

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## About the authors:

<sup>1</sup>Corresponding author. Doctor of Philosophy in Educational Leadership and Management. Teacher III, Department of Education and Aklan State University. Email: [rrepolito@gmail.com](mailto:rrepolito@gmail.com)

<sup>2</sup>Doctor of Philosophy in Science Education-Mathematics. Professor V, Aklan State University.



## 1. Introduction

Research is a cornerstone of educational advancement, enabling teachers to address instructional challenges, implement innovative pedagogical strategies, and contribute meaningfully to school improvement and policy development. Globally, there is a growing recognition of the importance of empowering teachers not only as consumers of knowledge but also as active contributors to the academic community (OECD, 2016; Menter, 2017). In countries such as Finland, Singapore, and the United Kingdom, teacher-led research has been institutionalized as a means to improve classroom practices and elevate the professional status of educators (Sahlberg, 2010; Cain & Harris, 2013). Similarly, in the Philippines, the Department of Education (DepEd) underscores the critical role of research by requiring public school teachers, especially those holding Master Teacher positions, to engage in action research as part of their professional responsibilities (DepEd Order No. 16, s. 2017).

Master Teachers, as senior instructional leaders, are expected to model exemplary teaching, mentor colleagues, and spearhead initiatives that promote research-informed instruction. However, while policies emphasize the integration of research into teaching practice, a persistent gap remains between these expectations and the actual research engagement of many educators. International studies indicate that teachers often face systemic barriers such as limited time, lack of institutional support, and insufficient training in research methodologies (Borg, 2010; Campbell & Groundwater-Smith, 2007). In the Philippine context, local findings echo these concerns. Manila et al. (2022) noted that teachers often struggle with the technical aspects of research writing due to inadequate exposure and training. Tamban and Maningas (2020) observed that while teachers value research, many lack the competencies needed to complete high-quality studies.

Personal and structural barriers compound these challenges. Caingcoy (2020) found that research involvement tends to decline with age, influenced by workload, shifting priorities, and declining self-efficacy. Basilio and Bueno (2019) and Antonio (2020) cited the lack of sustained training programs and time constraints as recurring issues, while Bonus (2024) highlighted teachers' struggles with organizing, conceptualizing, and writing research due to limited academic resources. Despite these recurring problems, few studies have provided an in-depth assessment specifically focused on Master Teachers, those who are mandated to lead by example in research and pedagogy.

While the existing literature has identified common obstacles, it often lacks depth in exploring how these issues manifest among educators with advanced teaching ranks. The novelty of this study lies in its targeted investigation of Master Teachers' research writing capabilities and the specific barriers they encounter. Unlike general teacher-focused studies, this research emphasizes a key subgroup whose influence on school culture and instructional practices is substantial. By narrowing the focus and assessing both capability and contextual challenges, this study addresses a critical gap in the current body of knowledge. Given this context, there is a pressing need to examine the research writing competencies of Master Teachers to inform the development of meaningful, practice-oriented interventions. As they are pivotal in shaping school-based research cultures and mentoring fellow educators, strengthening their capacity to conceptualize, conduct, and write research is vital.

Therefore, this study aims to assess the research writing capabilities of Master Teachers and to identify the key issues and challenges that hinder their research productivity. Specifically, it seeks to measure their level of research capability, and identify the specific issues they encounter in conducting and writing research. The results will serve as a basis for designing a Capability Enhancement Plan focused on improving Master Teachers' research conceptualization, organization, and academic writing, thereby fostering a stronger and more sustainable research culture in schools.

## **2. Literature Review**

### ***2.1. Research Capabilities of Master Teachers***

Research plays a vital role in improving educational quality by informing classroom practices, guiding decision-making, and responding to learner needs. For Master Teachers, this function becomes even more crucial as they are expected to lead innovations, mentor peers, and model research-informed instruction. As such, their research capability is central not only to their individual professional growth but also to promoting a school-wide research culture and sustaining educational improvements.

Research capability encompasses the ability to conceptualize, design, implement, analyze, and effectively communicate research. Caingcoy (2020) and Pentang and Domingo (2024) emphasized that productivity, evidenced through completed and disseminated research, is a strong indicator of research capability. For Master Teachers, such productivity also signals leadership in advancing pedagogical knowledge and influencing peers. However, literature

consistently points to persistent challenges that hinder many Master Teachers from fully developing or demonstrating their research competence (Pablo et al., 2025).

Farin et al. (2021) observed that teachers, including those in senior roles, often exhibit only fair competence in essential research skills such as sourcing literature, designing tools, applying statistical methods, and writing scholarly reports. Similarly, Albalawi and Johnson (2022) noted that while many teachers are moderately skilled in interpreting research data, they often lack depth in technical areas, particularly those requiring specialized knowledge like statistical analysis or instrument development. This gap is echoed in the findings of Bueno and Basilio (2019), who reported that even experienced educators struggle with software-based data analysis and developing valid research tools. Likewise, Caingcoy (2020) highlighted widespread discomfort among educators in analyzing both quantitative and qualitative data, skills critical to sound research.

The mere attendance at research training programs does not automatically translate to improved proficiency or confidence. Desta (2018) found that despite holding leadership positions, many educators lack hands-on research experience and often feel unprepared to conduct independent inquiries. Perez et al. (2022) further noted that despite participating in capacity-building initiatives, teachers still experience difficulty producing publishable research, primarily due to insufficient technical know-how in areas like data interpretation and software use. These studies collectively suggest that the disconnect between research training and practical application remains a key barrier. Diery and Vogel (2018) argue for integrating research into routine teaching practice, a model that aligns well with the responsibilities assigned to Master Teachers as instructional leaders. In the local context, this aligns with DepEd Order No. 65, s. 2003, which underscores the importance of cultivating a research-based culture in Philippine schools and designates Master Teachers as pivotal figures in this movement.

Several predictors have been identified to influence research capability, including one's attitude toward research, knowledge of methodologies, and past research engagement. Wong (2020) found that these variables collectively explain a significant portion (66%) of the variance in teachers' research competence. This finding is particularly relevant for Master Teachers, whose leadership positions necessitate not only technical proficiency but also a strong research orientation. In addition, Li and Zhang (2022) emphasized that access to supportive environments, mentoring, and research resources enhances teachers' performance,

factors that should be institutionalized as part of professional development for Master Teachers.

Although Master Teachers often have foundational knowledge of research, continued support remains essential. Gomez and Catan (2021) highlighted the need for ongoing capacity-building, collaborative research initiatives, and structured recognition of research outputs. Enhancing the research capability of Master Teachers is therefore not only beneficial for their own career trajectories but also vital in fostering a more vibrant and sustainable research culture within and across schools.

## ***2.2. Issues Encountered in Conducting Research***

Despite ongoing efforts to institutionalize research within basic education, Master Teachers continue to face substantial challenges in engaging with research activities. One of the most persistent barriers is the lack of time. Dev (2024) found that Master Teachers are frequently overwhelmed by administrative duties, mentoring responsibilities, and instructional leadership roles, which significantly limit opportunities for research engagement. Wong (2020) reported that Master Teachers often perceive research as an added burden rather than an integral component of their professional responsibilities. This perception stems from the absence of structured support systems and the demands of multitasking, which contribute to low participation rates, even among those who recognize the value of research. Similarly, Antonio (2020) observed that teachers are routinely assigned overlapping tasks, such as substituting for absent colleagues or performing supervisory functions, further hindering their ability to prioritize research.

Compounding these challenges is a lack of technical skills and confidence. Bago et al. (2019) emphasized that many teachers remain unfamiliar with essential research processes, including problem conceptualization, design selection, data analysis, and report writing. Limited access to mentors, reference materials, and financial resources further constrains their capacity to conduct meaningful research (Pablo et al., 2025). These barriers are not unique to the Philippines. Ulla (2018) found that teachers across ASEAN countries, including Malaysia and Singapore, face similar constraints, particularly in terms of inadequate training, funding, and institutional support. In the higher education context, Puse and Lamug (2024) and Lamug and Asis (2025) highlighted that faculty members in technical institutions also struggle with research capabilities due to multiple designations, limited institutional expectations, and

insufficient developmental opportunities. Their findings underscore the need for systemic reforms to cultivate a robust research culture across educational levels and contexts.

Beyond structural and technical limitations, Raymunde et al. (2024) offered a critical perspective on the prevailing mindset toward research. Their phenomenological study revealed that many tertiary instructors perceive research as an idealistic endeavor rather than a transformative platform for professional growth and institutional development. This perception, shaped by competing responsibilities and limited institutional support, may further discourage meaningful engagement in research activities. Meanwhile, Bago et al. (2019) concluded that educational leaders must actively provide research support to teachers, including mentorship, resources, and time allocation. Cultivating a strong research culture at the school level is essential to ensuring sustained participation and improved research outcomes.

### ***2.3. Research Capability Plan***

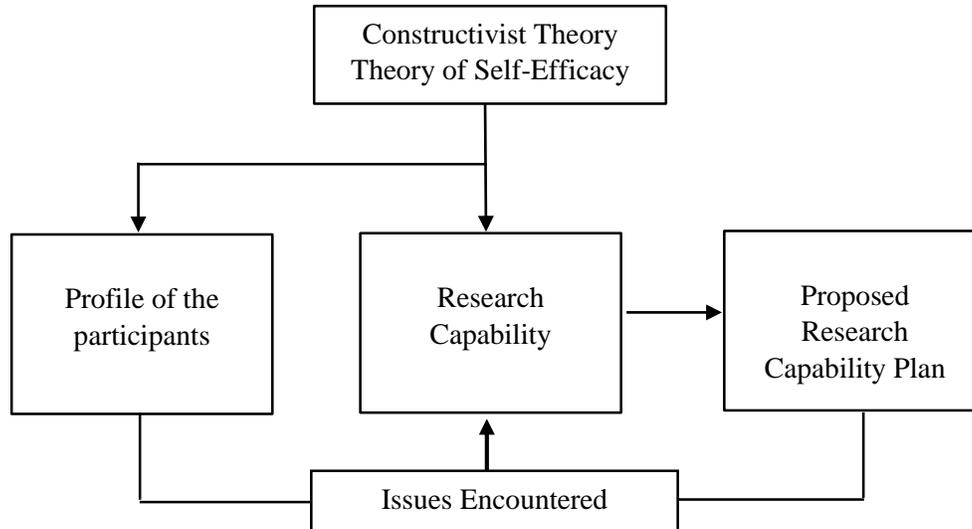
Research capacity building aims to strengthen the ability of teachers to perform high-quality, meaningful research. Rees et al. (2007) defined it as a process that enhances the skills of individuals and institutions to meet the demands of educational stakeholders. A structured capability-building plan should address gaps in teachers' methodological knowledge and provide opportunities to apply these skills in real research settings.

Leitch (2009) highlighted the importance of developing researchers' practical skills in data collection, analysis, and dissemination. Meanwhile, Perez et al. (2022) stressed the need to equip teachers with the technical know-how to use modern tools and software for data processing. These programs not only improve research output but also contribute to a more informed and empowered teaching force. Philippine Normal University (2013) proposed that any research capability enhancement plan should aim to assist teachers in conducting research, produce quality outputs for institutional use, and create a pool of mentors who can guide fellow educators. Institutions that prioritize such initiatives can expect greater opportunities for funding, collaboration, and recognition.

## 2.4. Theoretical Framework

**Figure 1**

*The theoretical paradigm of the study*



This study is grounded in Jerome Bruner’s Constructivist Theory and Albert Bandura’s Theory of Self-Efficacy. Bruner’s theory posits that learners actively construct knowledge based on their experiences. Applied to teacher research, this theory suggests that Master Teachers construct professional knowledge through reflective inquiry, which in turn informs their instructional and mentoring practices. In this context, teachers’ engagement in research allows them to draw insights from practice, refine pedagogical strategies, and mentor others based on evidence-driven decisions.

Bandura’s concept of self-efficacy emphasizes the role of confidence in determining whether individuals initiate and sustain specific behaviors. In the realm of research, teachers who believe in their ability to perform tasks such as data collection, analysis, and manuscript preparation are more likely to engage in and complete research activities. This theory supports the notion that enhancing teachers’ research self-efficacy can increase their actual research engagement and success.

Together, these theories underpin the investigation into Master Teachers’ research capabilities and guide the identification of strategies to support their professional growth through research.

### **3. Methodology**

#### ***3.1. Research Design***

This study employed an embedded mixed methods design, as outlined by Creswell (2015). In this approach, the primary method was quantitative, involving the administration of a structured survey to thirty purposively selected Master Teachers to assess their research capabilities. Embedded within this phase was a qualitative component, conducted through a focus group discussion (FGD) with eight selected Master Teachers. The qualitative phase was strategically integrated to provide deeper insights and explanations for the patterns and findings observed in the quantitative data. This design allowed the researcher to enrich the interpretation of results by capturing participants' experiences and perspectives, thereby offering a more nuanced understanding of the factors influencing research engagement among Master Teachers.

#### ***3.2. Participants of the Study***

Kalibo I and II were purposively selected as the study locale due to their status as the most populated districts in Aklan, with the highest concentrations of schools and Master Teachers. This ensured a diverse and representative sample for assessing research capability. Their central location, logistical accessibility, and sustained involvement in research activities further supported their suitability for the study. The participants in the quantitative phase were thirty Master Teachers. These teachers were purposively selected based on their active roles in instruction and mentoring, and their prior engagement in research-related activities. These indicators ensured that the participants possessed practical and theoretical engagement with the research process. These participants completed a validated questionnaire assessing their research capability across various domains.

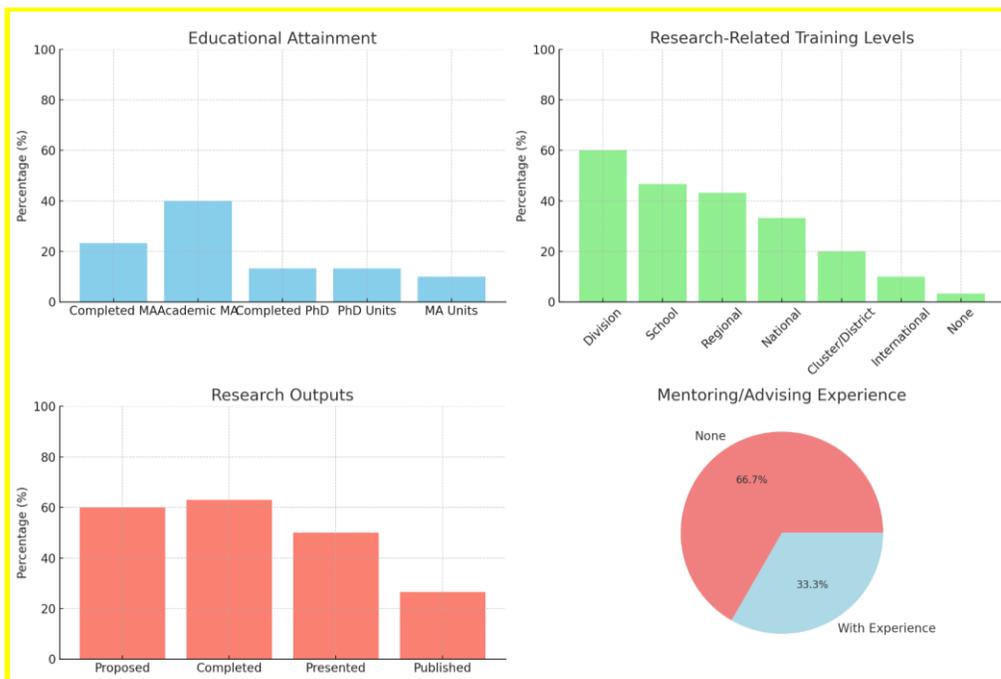
For the qualitative phase, eight participants were selected from the original group of 30 respondents. Selection was based on their availability, willingness to participate, and the diversity of their research experiences and capabilities, ensuring that the FGD captured a range of perspectives. This helped gather rich, contextual insights into the experiences, challenges, and professional development needs of Master Teachers in the area of research writing.

The demographic profile of the Master Teachers in the District of Kalibo I and II includes educational attainment, research-related training, research outputs, and mentoring experiences. In terms of educational attainment, all Master Teachers have pursued graduate

studies. Specifically, 23.3% held a completed Master's degree, while 40% had finished the academic requirements for the same. Meanwhile, 13.3% had earned a Doctorate degree, and another 13.3% had earned Doctorate units. Additionally, 10% had completed only Master's units. These figures suggest that a significant majority have either completed or are actively working toward advanced degrees, with most having reached or surpassed the Master's level.

**Figure 2**

*Demographic profile of master teachers*



On research-related training, 60% attended division-level activities, 46.6% participated at the school level, 43.3% at the regional level, 33.3% at the national level, 20% at the cluster or district level, and 10% at the international level, while only 3.3% had no training. This indicates that almost all Master Teachers attended research-related training at various levels. In terms of research outputs, 60% had proposed, 63% had completed, 50% had presented, and only 26.6% had published research. School-level outputs were the most common, while publication remained limited, with 73.3% of the respondents reporting no published work. This suggests that most Master Teachers do not usually engage in research activities. Lastly, in terms of mentoring or advising experiences, 66.7% had none, while 33.3% had experience at

various levels, showing that more than half of the Master Teachers do not engage in research mentoring and advising.

### ***3.3. Instrumentation***

To assess the research capabilities of the participants, the study utilized the Research Capability Self-Assessment Instrument (RCSI) by Abrazado and Coronel (2016), which was adapted and modified to suit the context of Master Teachers. The instrument measured competencies in key areas: technical research skills, conceptualization of research problems, research design, data processing, and academic writing.

To ensure its quality, the instrument underwent content validation by field experts, resulting in a validity index of 0.92, indicating strong content validity. Furthermore, it was pilot-tested with a separate group of Master Teachers and achieved a Cronbach's alpha of 0.979, demonstrating high internal consistency.

Following the analysis of the quantitative data, a Focus Group Discussion (FGD) guide was developed to collect qualitative data. The guide was crafted to explore the narrative experiences, challenges, and perceptions of Master Teachers related to research writing. Insights gathered during the FGD were also used to triangulate the quantitative findings and provide a deeper interpretation.

### ***3.4. Data Collection Procedure***

Data collection was conducted in two phases. In the quantitative phase, the researcher administered the structured survey to thirty Master Teachers from Kalibo I and II districts. The survey aimed to generate baseline data on the teachers' level of research capability, highlighting both strengths and areas requiring improvement. Based on these findings, the qualitative phase followed. Eight Master Teachers were invited to participate in a Focus Group Discussion (FGD) designed to delve into their personal experiences, challenges encountered, and support mechanisms related to research engagement. The selection ensured varied perspectives, representing different levels of research capability.

To maintain the credibility and authenticity of qualitative data, audio and video recordings of the FGDs were made, with informed consent from all participants. Detailed field notes were also taken. All recordings were transcribed verbatim, preserving the depth and nuances of participant responses for accurate analysis.

### ***3.5. Data Analysis***

The study employed both quantitative and qualitative methods of data analysis. For the quantitative phase, the statistical tools used included frequency, percentage, mean, standard deviation, and Spearman correlation. For the qualitative phase, thematic analysis was conducted following the six-phase framework by Braun and Clarke (2006): (1) familiarization with the data, (2) generating initial codes, (3) searching for themes, (4) reviewing themes, (5) defining and naming themes, and (6) producing the report. This rigorous analytic process allowed for the identification of meaningful themes that helped explain and expand upon the quantitative findings, ultimately leading to more holistic and actionable conclusions.

### ***3.5. Research Ethics***

To follow the standard ethics procedure, formal approval was obtained from the Research and Planning Office of the Division prior to the commencement of the study. Master teachers were provided with invitation and informed consent forms, which clearly outlined the purpose of the research, the voluntary nature of participation, and the safeguards in place to ensure confidentiality. All data were anonymized and handled in compliance with the provisions of the Data Privacy Act of 2012, ensuring participants' privacy and data security throughout the research process.

## **4. Findings and Discussion**

### ***4.1. Research Capability of Master Teachers in the District of Kalibo I and II***

This section discussed the research capability of master teachers in the district of Kalibo I and II. The research capability is subdivided into four: technical skills, conceptualizing the research problem, methodology, and data processing and interpretation.

As reflected in Table 1, the master teachers were assessed to be capable ( $M=3.686$ ,  $SD=.621$ ) in terms of technical skills. The respondents demonstrated moderate capability in plagiarism checking with a weighted mean of 3.433. Further, respondents showed capability in online research and identifying and using computer commands and programs with a weighted mean of 3.533.

The result implies that most MTs are not capable of checking the plagiarism of their output. The same results were found in the study of Selemani et al. (2018) which stated that even though teacher respondents claimed to have a conceptual understanding of plagiarism,

majority of them claimed to have engaged in both intentional and unintentional plagiarism, primarily as a result of laziness and poor time management (84.9%) and a lack of proficient academic writing skills (84.9%).

**Table 1**

*The research capability of the master teachers in terms of technical skills*

| <b>Statement</b>   | $\bar{x}$ | <b>Interpretation</b> | <b>SD</b>   |
|--|-----------|-----------------------|-------------|
| Written communication  | 4.100     | Capable               | .661        |
| Data Analysis/Data Interpretation  | 3.633     | Capable               | .668        |
| Research organization  | 3.700     | Capable               | .749        |
| Generating tables/graphs   | 3.600     | Capable               | .563        |
| Interviewing Skills  | 3.833     | Capable               | .746        |
| Online research (use of electronic resources databases and search engines (ICT)) | 3.533     | Capable               | .899        |
| Identify/Use of computer commands/programs/software (ICT)                        | 3.533     | Capable               | .819        |
| Acknowledging or citing sources/cross-referencing                                | 3.633     | Capable               | .927        |
| Plagiarism Checking  | 3.433     | Moderately Capable    | .935        |
| Paraphrasing/Summarizing Skills  | 3.700     | Capable               | .876        |
| Proofreading/Editing Skills  | 3.767     | Capable               | .773        |
| Formatting Skills  | 3.767     | Capable               | .817        |
| <b>Area Mean</b>   | 3.686     | <b>Capable</b>        | <b>.621</b> |

**Legend:** 4.50-5.00 Excellent/Highly Capable; 3.50-4.49 Very Satisfactory/Capable; 2.50-3.49 Satisfactory/Moderately Capable; 1.50-2.49 Fair/ Slightly Capable; 1.00-1.49 Poor/Not Capable

Table 2 shows that the respondents were assessed to be capable ( $M=3.743$ ,  $SD=.761$ ) in conceptualizing a research problem. The indicators: defining concepts, constructing variables, formulating hypotheses or propositions, developing a theoretical framework, and developing a conceptual framework, gained the lowest weighted mean of 3.633, which is interpreted to be capable.

The results imply that MTs are knowledgeable in identifying classroom problems and their possible solutions. The same result was found by Antonio (2020) that master teachers have a good understanding of action research, and they can identify classroom problems and their possible solutions. In contrast, Tingabngab and Binayao (2023) emphasized that many teachers still face difficulties with research components that require deeper theoretical engagement, such as constructing sound conceptual frameworks and articulating testable

hypotheses. Their study revealed that this gap is often rooted in limited access to sustained research mentoring and technical guidance.

**Table 2**

*The research capability of the master teachers in terms of conceptualizing research problem*

| <b>Statement</b>   | $\bar{x}$ | <b>Interpretation</b> | <b>SD</b>   |
|--|-----------|-----------------------|-------------|
| Writing a research title   | 3.800     | Capable               | .886        |
| Identification of a research problem or topic                    | 3.867     | Capable               | .819        |
| Reviewing related literature                                     | 3.733     | Capable               | .784        |
| Defining concepts, constructs, or variables                      | 3.633     | Capable               | .850        |
| Formulating hypothesis or proposition                            | 3.633     | Capable               | .764        |
| Developing a theoretical framework                               | 3.633     | Capable               | .850        |
| Developing a conceptual framework                                | 3.633     | Capable               | .850        |
| Formulating the research objectives or statement of the problems | 3.733     | Capable               | .739        |
| Setting the scope and limitations of the study                   | 3.833     | Capable               | .874        |
| Stating the significance of the research study                   | 3.933     | Capable               | .784        |
| <b>Area Mean</b>   | 3.743     | <b>Capable</b>        | <b>.761</b> |

**Legend:** 4.50-5.00 Excellent/Highly Capable; 3.50–4.49 Very Satisfactory/Capable; 2.50–3.49 Satisfactory/Moderately Capable; 1.50–2.49 Fair/ Slightly Capable; 1.00–1.49 Poor/Not Capable

Similarly, Saro and Taray (2024) reported that while public school teachers value research, they often feel underprepared when it comes to organizing and developing key research components, especially frameworks. Many reportedly rely on templates or peer assistance due to uncertainty in independently articulating research logic and theoretical alignment. These contrasting findings highlight the need for targeted capability-building interventions, particularly in areas that require analytical depth, abstraction, and theoretical grounding. While the respondents demonstrate baseline competence in conceptualizing research problems, the data suggests a gap in more advanced research skills that are critical for producing rigorous and impactful studies. Addressing these gaps may involve mentoring programs, hands-on training workshops, and scaffolded writing support that guides Master Teachers through the full cycle of research conceptualization.

Table 3 shows that the Master Teachers are assessed to be capable ( $M=3.621$ ,  $SD=.771$ ) in terms of methodology. The respondents demonstrated moderate capability in designing a

research instrument, identifying the research designs, and choosing and discussing data analysis tools with a weighted mean of 3.367, 3.433, and 3.500, respectively.

**Table 3**

*The research capability of the master teachers in terms of methodology*

| <b>Statement</b>  | $\bar{x}$ | <b>Interpretation</b> | <b>SD</b>   |
|---|-----------|-----------------------|-------------|
| Identifying the research design                                     | 3.433     | Moderately Capable    | .897        |
| Describing the study locale   | 3.767     | Capable               | .935        |
| Discussing the population, sample, and choosing sampling techniques | 3.633     | Capable               | .764        |
| Identifying sources of data   | 3.733     | Capable               | .868        |
| Designing a research instrument                                     | 3.367     | Moderately Capable    | .927        |
| Discussing the procedures in data collection                        | 3.733     | Capable               | .784        |
| Discussing the ethical considerations                               | 3.800     | Capable               | .846        |
| Choosing and discussing data analysis tools                         | 3.500     | Moderately Capable    | .820        |
| <b>Area Mean</b>  | 3.621     | <b>Capable</b>        | <b>.771</b> |

**Legend:** 4.50-5.00 Excellent/Highly Capable; 3.50–4.49 Very Satisfactory/Capable; 2.50–3.49 Satisfactory/Moderately Capable; 1.50–2.49 Fair/ Slightly Capable; 1.00–1.49 Poor/Not Capable

This implies that Master Teachers need to be guided in terms of designing a research instrument and identifying the research design and data analysis tools. Previous research conducted also reported that teachers indicated a fair level of competence in conducting research (Alumbro et al., 2015), designing an experimental study, selecting and developing research instruments, choosing appropriate statistical tools (Basilio & Bueno, 2019) and utilizing software in analyzing data (Perez, et al., 2022).

Table 4 presents that the Master Teachers have moderate capability ( $M=3.400$ ,  $SD=.811$ ) in terms of research data processing and interpretation. Identifying and using statistical treatment of data for quantitative research gained the lowest weighted mean of 3.133 (moderately capable), identifying and using treatment of data for qualitative research obtained a weighted mean of 3.233 (moderately capable), and presenting data in the textual, graphical, and tabular form obtained a weighted mean of 3.367 which is interpreted to be moderately capable.

The results suggest that the master teachers have predicaments towards identifying and using statistical tools for both quantitative and qualitative data and presenting this data in

textual, graphical, and tabular form. The same results were found in the study of Farin et al. (2021), which stated that teacher-respondents noted a dilemma in identifying statistical tools to be used in the study, as well as in the computation of the data. Further, teachers have a fear of analyzing data (Tindowen et al., 2019) and find it difficult to analyze qualitative and quantitative data, and organize and write the findings (Caingcoy, 2020).

**Table 4**

*The research capability of the master teachers in terms of research data processing and interpretation*

| <b>Statement</b>   | $\bar{x}$    | <b>Interpretation</b>     | <b>SD</b>   |
|--|--------------|---------------------------|-------------|
| Identifying and using statistical treatment of data for quantitative research  | 3.133        | Moderately Capable        | .860        |
| Identifying and using treatment of data for qualitative research               | 3.233        | Moderately Capable        | .858        |
| Presenting the data in textual, graphical and tabular form                     | 3.367        | Moderately Capable        | .889        |
| Analyzing data and interpreting results  | 3.433        | Moderately Capable        | .897        |
| Writing implication and conclusion from results                                | 3.567        | Capable                   | .935        |
| Utilizing relevant related literature and studies in the discussion of results | 3.667        | Capable                   | .922        |
| <b>Area Mean</b>   | <b>3.400</b> | <b>Moderately Capable</b> | <b>.811</b> |

**Legend:** 4.50-5.00 Excellent/Highly Capable; 3.50–4.49 Very Satisfactory/Capable; 2.50–3.49 Satisfactory/Moderately Capable; 1.50–2.49 Fair/ Slightly Capable; 1.00–1.49 Poor/Not Capable

#### ***4.2. Significant Relationship between Master Teachers' Research Capability and their Demographic and Research-Related Profile***

This section discusses the significant relationship between the master teachers' research capability and their demographic profile, which includes educational attainment, attendance to research-related seminars and trainings, research outputs, and research mentoring.

Table 5 presents the analysis of the relationship between master teachers' research capability and their demographic and research-related profiles revealed that only two variables showed a statistically significant influence: proposed research and research mentoring or advising experience. A significant positive correlation was found between research capability and proposed research ( $r = 0.595$ ,  $p = 0.028$ ), indicating that master teachers who actively

engage in proposing research projects tend to demonstrate higher levels of research competence. Similarly, research mentoring or advising experiences also had a significant positive relationship with research capability ( $r = 0.540$ ,  $p = 0.049$ ), suggesting that teachers involved in guiding others through the research process benefit by strengthening their own skills and understanding. These findings highlight that hands-on involvement in research activities, such as proposal development and mentoring, plays a critical role in enhancing one's research proficiency.

**Table 5**

*Significant relationship between master teachers' research capability and demographic profile*

| Variables                                       | r      | p-value | Remarks         |
|---|--------|---------|-----------------|
| Educational Attainment                          | 0.353  | 0.056   | not significant |
| Attendance to Research-related Training/Seminar | 0.889  | 0.302   | not significant |
| Proposed Research                               | 0.595* | 0.028   | significant     |
| Completed Research Output                       | 0.214  | 0.507   | not significant |
| Presented Research Output                       | 0.451  | 0.103   | not significant |
| Published Research Output                       | 0.483  | 0.135   | not significant |
| Research Mentoring/Advising Experiences         | 0.540* | 0.049   | significant     |

**Legend:** \* Significant at 0.05 level

In contrast, other variables, although showing positive correlations, did not yield statistically significant results. Educational attainment ( $r = 0.353$ ,  $p = 0.056$ ) had a moderate positive correlation but fell short of the significance threshold. Attendance in research-related trainings or seminars ( $r = 0.889$ ,  $p = 0.302$ ), completed research outputs ( $r = 0.214$ ,  $p = 0.507$ ), presented research outputs ( $r = 0.451$ ,  $p = 0.103$ ), and published research outputs ( $r = 0.483$ ,  $p = 0.135$ ) also showed no significant influence on research capability. This suggests that while these factors may contribute to exposure and knowledge acquisition, they do not necessarily translate to increased research competence unless paired with active engagement.

The findings underscore the importance of practical, experience-based learning in developing research capability. Passive forms of professional development, such as attending seminars or relying on academic credentials, appear insufficient on their own. Instead, involvement in real research work, planning, proposing, and mentoring, has a more profound impact. Educational institutions and school divisions are therefore encouraged to reframe their research capability enhancement strategies. Programs should prioritize mentoring

opportunities, collaborative research writing, and project-based training, rather than focusing solely on qualifications or seminar participation. Furthermore, institutionalizing mentoring systems not only benefits the mentees but also reinforces the mentors' own research skills, creating a mutually beneficial cycle of professional growth. In light of the limited impact of traditional training, these must also be redesigned to include hands-on components and coaching elements to ensure applicability. Finally, strong leadership support, resources, and an enabling environment are essential to cultivate a research-driven culture in the educational setting.

### ***4.3. Issues Encountered by the Master Teachers in Doing Research***

In this study, issues were identified using thematic analysis of the Master Teachers' FGD. From the issues identified, the following themes were generated: (1) knowledge and skill gap, (2) input to training, output to efficiency, (3) time is an element, and (4) support is an extra mile.

**Table 7**

*Initial codes, subthemes, and themes*

| <b>Quotation</b>   | <b>Initial Code</b>                      | <b>Subtheme</b>  | <b>Theme</b>   |
|--|--|--|--|
| <p>“Nobody taught us how to use (SPSS). We only hire a statistician to do the computations and then pay them.”</p> <p>“We only hire a statistician to do the work because we are incapable of doing it ourselves.”</p> | Lack of training in statistical tools    | <p>Research Competency Barriers</p> <p>Limited autonomy in research analysis</p>           | Knowledge and Skill Gap                              |
| <p>“Even at the school or district level, trainings should be provided because the primary function of MT is to conduct research, which is currently not happening.”</p>   | Lack of localized training opportunities | <p>Capacity Building and Support</p> <p>Gaps in institutionalized research development</p> | <p>Input to Training</p> <p>Output to Efficiency</p> |
| <p>“How can we conduct research when have a lot of concerns to attend. We have so many responsibilities and functions that we need deal first. If you are conducting research that should be your only focus.”</p>     | Competing duties limit research focus    | <p>Organizational Constraints</p> <p>Research deprioritized due to workload</p>            | Time is an Element                                   |
| <p>“There was no funding provided. Although research is conducted for the school, funding is scarce. Perhaps this is why Master Teachers have decided not to conduct research anymore, due to a lack of funding.”</p>  | Insufficient financial support           | <p>Institutional Barriers</p> <p>Lack of incentives or budget for research</p>             | Support is an Extra Mile                             |

**Knowledge and skill gap.** Master Teachers are expected to be independent learners who continuously enhance their expertise to support both student learning and the professional growth of their peers. However, many of them encounter significant challenges in conducting action research, primarily due to limited knowledge and skills. These challenges are often rooted in their difficulty completing the full components of a research study and identifying essential research variables, critical units in any study that guide analysis and interpretation (Nebeker, n.d.).

Several MTs admitted their lack of familiarity with key research elements. As MT 1 explained, *“No, I am not familiar. I have a general idea of the content, but it is difficult for me to identify the appropriate tools and variables for the study. My knowledge and skills in conducting research are not enough.”* Similarly, MT 3 noted, *“I have a little background in research since I have been a co-author of action research before.”* In line with this, MT 6 added, *“I have an idea of research, but when it comes to action research, I have no knowledge of the format or how to do it.”* MT 4 also shared, *“I have not conducted any action research in my teaching career.”*

In addition to these concerns, the Master Teachers shared that identifying and conceptualizing a research problem posed another significant challenge. As MT 8 expressed, *“Identifying a problem in research is already challenging.”* This aligns with the findings of Ocbian et al. (2015), which revealed that many teachers struggle with formulating research problems and titles. Given that research problems serve as the foundation for knowledge advancement (Kerlinger, 1979), this challenge has serious implications. Karadağ (2009) also observed that many research problems in education tend to be unclear and disconnected from appropriate methods, leading to issues in later stages of the research process.

The Master Teachers also reported difficulties in understanding research designs. As MT 6 reflected, *“I have no idea how to conduct research. During our time, qualitative research has predominated since it is easier to conduct than quantitative research. That is why we usually conduct quantitative research.”* Moreover, the proper selection of statistical methods emerged as another area of concern. MT 3 admitted, *“I do not know how to choose the correct statistical tool and method for my research. I am not familiar with the tools.”* Likewise, MT 5 said, *“I have no idea how to use it (statistical tool). I am not aware of how to use or manipulate it,”* and MT 7 added, *“I’ve heard about it, but I don’t know how to utilize it.”* As Mishra et al.

(2019) pointed out, inappropriate statistical choices can compromise the reliability of research findings.

Due to this gap, some Master Teachers resorted to manual computations or external assistance. MT 2 explained, *“I only heard about it (statistical tool). I don’t use them, I only do manual computations,”* while MT 5 shared, *“Nobody taught us how to use SPSS. We only hire a statistician to do the work because we are incapable of doing it ourselves.”*

These personal accounts are supported by earlier research. Ulla (2018) noted that few teachers engage in research due to a lack of foundational skills. Similarly, studies by Albalawi and Johnson (2022), Morales et al. (2016), and Clarke and Embury (2016), found that many teachers experience moderate difficulty in conducting action research, largely due to a limited grasp of its core components.

Given the complexity of research, it cannot be carried out without adequate preparation. Teachers must be familiar with its scholarly steps and methodological rigor. This gap in capacity highlights the pressing need for a structured and supportive development plan. As emphasized by Gomez and Catan (2021) and Pentang and Domingo (2024), even those with some research background require continuous training and guidance to refine their research knowledge and skills.

***Input to training, output to efficiency.*** Master Teachers acknowledge that their limited participation in doing research is largely due to insufficient training and institutional support. Although they are expected to lead in instructional improvement and professional development, many Master Teachers reported a lack of access to relevant, updated research training opportunities.

During the focus group discussion, several Master Teachers emphasized the absence of consistent training. For instance, MT 3 remarked, *“There is no training given to teachers even at the division level. I did take part in one division-level training, but it was a long time ago.”* Echoing this sentiment, MT 4 added, *“Even at the school or district level, training should be provided because the primary function of MT is to conduct research, which is currently not happening.”*

Further highlighting the issue of follow-up support, MT 1 shared, *“The coordinator who received training from the higher-up does not conduct echo training, despite the fact that the research findings serve as the foundation for policies and guidelines... Teachers are not*

*given any assistance.*” This lack of dissemination and institutional attention contributes to the persistent gap in research capability.

In addition to the lack of access, some Master Teachers noted that the training they had received was outdated. MTs 7 and 8 recalled, *“I attended training last 2014–2015.”* Reinforcing this point, MT 4 admitted, *“During our time, no one has been teaching research correctly. We only copy what has already been done and change some of the data.”*

This local perspective reflects broader findings. According to Bago et al. (2019), many teachers in the Philippines lack the necessary training to conduct research and often receive minimal support from their school administrators in terms of funding and collaborative opportunities. The study concluded that targeted training and administrative assistance are essential for developing teachers’ research capacity. Indeed, training plays a pivotal role in equipping teachers with the skills to investigate and address classroom issues effectively. Thus, to enable Master Teachers to confidently pursue research, they must be consistently exposed to relevant professional development opportunities.

***Time is an element.*** Time, as a limited resource, plays a crucial role in shaping the quality, depth, and feasibility of research endeavors. In education, researchers must balance the pressure of meeting deadlines with the need for thorough, methodologically sound work. However, for Master Teachers, time constraints often hinder their ability to engage meaningfully in research.

A major contributor to this limitation is their heavy teaching load. As MT 1 shared, *“I don’t conduct (research) anymore because I don’t have time, especially that I am teaching grade 1 pupils who I cannot just leave.”* Echoing this concern, MT 2 added, *“I don’t conduct research because it is hard to do when I have classes.”* The demands of daily teaching make it difficult to carve out time for focused research.

Other Master Teachers emphasized that research requires undivided attention. MT 4 pointed out, *“When you are tasked to do research, it should be your sole focus,”* while MT 8 reinforced this by stating, *“That is why, when doing research, you should have enough time to allot because it will be hard to finish it.”* These statements reflect the understanding that research is not a task that can be completed alongside other major responsibilities.

These local experiences are supported by literature. Antonio (2020) found that Master Teachers often forego research due to their involvement in various tasks such as classroom

observations or covering for absent colleagues. Tindowen et al. (2019) further emphasized how overlapping responsibilities contribute to teachers viewing research as an additional burden. Given the heavy workload and demanding nature of their profession, it is understandable that teachers may have little time and energy left to conduct quality research. By giving teachers a considerable number of hours for teaching and conducting research, they will be able to deliver their work more effectively and efficiently.

***Support is an extra mile.*** Conducting research requires more than just individual effort; it demands institutional backing and collegial cooperation. However, several Master Teachers reported that a lack of support from both school heads and fellow teachers hinders their engagement in research.

One of the recurring concerns was the unsupportive attitude of some administrators during data collection. As MT 1 explained, *“Some principals are not friendly and supportive during data collection and would tend to tell the researcher that it is now their responsibility to find those teacher-respondents.”* This lack of administrative assistance places additional burden on teachers attempting to carry out their studies.

In terms of peer collaboration, Master Teachers also described difficulties. For example, MT 4 noted, *“Some colleagues are not cooperative and supportive due to professional jealousy,”* highlighting interpersonal barriers that discourage research initiatives. Similarly, MT 6 shared their experience, stating, *“Some teachers will accept it (questionnaire) but then not return it. They have numerous reasons for not returning it.”* Supporting this, MT 8 added, *“Some teachers have negative perceptions toward research. They only give excuses that they are busy, that they cannot answer the questionnaires.”*

Beyond interpersonal challenges, some Master Teachers expressed concerns about biased selection in training opportunities. MT 5 observed, *“The teachers who are sent to attend trainings were a selected few. You will not be able to attend trainings if you are not known by the head or the PSDS... Hopefully, those selected to attend the training in the regional or division level do an echo-seminar.”* This perception of favoritism may lead to disengagement among equally qualified teachers who are overlooked for professional development.

Another major issue is financial support. The lack of funding for research projects forces many teachers to finance their own studies. MT 1 plainly stated, *“There is no financial assistance. (To carry out the research) you must pay out of your pocket.”* Echoing this, MT 2

explained, *“If the research committee accepts your paper for funding, you would receive funds; otherwise, you will have to pay out of your pocket.”*

For some, this burden has discouraged further research engagement. MT 4 admitted, *“There was no funding provided. Although research is conducted for the school, funding is scarce. Perhaps this is why Master Teachers have decided not to conduct research anymore.”* Likewise, MT 7 emphasized the cost-related barrier, saying, *“Another factor is that conducting research is costly. You should have a lot of money to conduct research.”*

These challenges are supported by research literature. Meerah et al. (2002) and Ulla (2018) revealed that insufficient funding and lack of materials are persistent issues for teacher-researchers. Antonio (2020) further noted that Master Teachers need a support system that stays with them throughout the research process. To encourage meaningful research output, adequate assistance is essential. Ulla (2018) emphasized that providing research budgets, training, and workshops is vital in motivating teachers to engage in scholarly work.

#### ***4.4. Proposed Research Capability Enhancement Plan***

The findings of the study reveal a clear understanding of the current research capability and the challenges encountered by Master Teachers in Kalibo Districts I and II, serving as the foundation for the formulation of a focused Research Capability Enhancement Plan. Despite being academically qualified, most having completed master’s degrees and attended various research-related training, Master Teachers are not regularly engaged in actual research activities or in mentoring others. Their self-assessed research capabilities indicate confidence in technical skills, problem conceptualization, and writing methodology, but a notable gap exists in data processing and interpretation, where they rated themselves only as moderately capable.

The study further reveals that educational attainment, frequency of attending seminars, and previously completed, presented, or published research outputs do not significantly influence research capability. However, a significant relationship was found between research capability and both proposed research outputs and experience in mentoring or advising research, suggesting that hands-on engagement plays a critical role in developing research competence. This indicates a need to shift the focus from merely attending trainings to actively applying skills through research practice and mentorship.

Moreover, thematic analysis of issues encountered by Master Teachers sheds light on deeper systemic and contextual barriers. These include insufficient knowledge and skills, lack of adequate and effective training, time constraints, and limited support in terms of finances and motivation. These recurring issues suggest that capability-building efforts must be comprehensive, addressing both skill development and the institutional conditions that affect research engagement.

In response to these findings, a Research Capability Enhancement Plan is proposed, focusing on five critical areas: (1) strengthening technical skills through intensive, hands-on training; (2) guiding teachers in conceptualizing research problems rooted in classroom and institutional realities; (3) enhancing methodological knowledge to improve the quality and feasibility of research designs; (4) building competence in data processing and interpretation using relevant tools and software; and (5) increasing access to financial and institutional support for research implementation. This holistic plan is intended to empower Master Teachers not just to understand research but to lead and mentor it, thereby contributing more significantly to evidence-based educational practices and continuous improvement in their schools.

## **5. Conclusion**

Master Teachers have demonstrated a clear commitment to professional growth, as reflected in their pursuit of graduate studies and participation in research-related seminars and training. These findings indicate a strong awareness of the value of continuous learning and development. However, the data also reveal that educational attainment and training attendance do not automatically equate to enhanced research capability. While many MTs have completed advanced degrees and attended professional development activities, their limited engagement in presenting or publishing research suggests that they are not fully translating this learning into practice. This conclusion is supported by the observed discrepancy between the number of teachers who engage in research writing and those who disseminate their work through conferences or publications.

Moreover, the findings show that although Master Teachers are involved in activities like writing proposals and completing papers, only a few take the crucial step of sharing their findings, an essential indicator of research productivity. Since research capability is best reflected in tangible outputs such as presentations, publications, and implemented projects, the

lack of these outcomes points to gaps in essential research skills, such as data analysis, academic writing, or navigating publication processes. Addressing these gaps is vital, as the results affirm that conducting research not only strengthens teaching practices but also fosters a deeper understanding of students' needs and supports evidence-based improvements within schools. Therefore, while the intent and effort toward professional development are present, there is a clear need for sustained mentorship, hands-on application, and institutional support to elevate Master Teachers' research capacity from potential to productivity.

## **6. Recommendation**

To foster a robust research culture, collaboration between teachers and institutions is essential. Comprehensive training programs focused on technical writing skills and increased opportunities for research-based practice are recommended. The Department of Education should provide targeted feedback and interventions, particularly through the Research and Planning Office, by offering workshops and training to alleviate the challenges teachers face. School administrators must encourage and support their teachers' research efforts, and initiatives should be developed to sustain and enhance their motivation. Testing the proposed research capability enhancement plan and conducting similar studies in other areas can help validate and strengthen these findings, driving continuous improvement and innovation in education.

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This study was conducted in accordance with the ethical guidelines set by the Aklan State University. The conduct of this study has been approved and given relative clearance(s) by Aklan State University Research Ethics Committee.

**Declaration**

The author declares the use of Artificial Intelligence (AI) in writing this paper. In particular, the author used Semantic Scholar and Iris.ai to find relevant related literature to support the study, and Quillbot for paraphrasing ideas. The author takes full responsibility for ensuring proper review and editing of content generated using AI.

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