ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/25feb090

Driving Forces of Master Teachers' Research Capability: Towards Building a Research Culture in Claver, Gigaquit, and Bacuag District Schools of Surigao Del Norte

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Publication Date: 2025/06/18

Abstract: This study investigates the driving forces behind the development of a research culture among master teachers in Claver, Gigaquit, and Bacuag District Schools of Surigao del Norte. Through a mixed-methods approach, the study explores the perceptions and experiences of master teachers regarding factors influencing their engagement in research. Data will be collected through surveys, interviews, and document analysis, focusing on factors such as leadership support, professional development opportunities, research incentives, and the perceived impact of research on teaching practices. The findings will provide insights into the key drivers of research culture among master teachers, highlighting successful strategies and identifying areas for improvement. This research aims to contribute to the development of a robust research culture in Claver, Gigaquit, and Bacuag District Schools of Surigao del Norte, ultimately leading to enhanced teaching practices and improved student learning outcomes. Professional Development Opportunities (92.9%): Majority sought training, workshops, and conferences. Collaboration and Support (88.6%: Most valued peer support, mentoring, and networking. Recognition and Incentives (85.7%): Many motivated by awards, promotions, and financial rewards. Autonomy and Flexibility (81.4%): Most appreciated freedom to design and manage time. Administrative support (75.7%): Most recognized school administration's role in facilitating research.

Keywords: *Driving Forces, Development, Research Capability.*

How to Cite: Vincent G. Parcon; Mauricio S. Adlaon; (2025). Driving Forces of Master Teachers' Research Capability: Towards Building a Research Culture in Claver, Gigaquit, and Bacuag District Schools of Surigao Del Norte. *International Journal of Innovative Science and Research Technology,* 10(2), 2634-2641. https://doi.org/10.38124/ijisrt/25feb090

I. INTRODUCTION

According to Abon's survey, just 22.81 percent of academics nationwide engaged in research, despite incentives like as publication of research results, attendance at local/national/international conferences, honoraria, and research load credits. It poses various questions, hence it is the subject of countless investigations. Some study has been conducted on the research culture; however, the majority of these studies have concentrated on higher education, and the findings differ in terms of the causes.

The Department of Education (DepEd) does not prioritize research because its major goal is to provide basic literacy skills to elementary and secondary students. Nonetheless, the DepEd understands the importance of research and encourages its instructors to conduct action research, which is one of the conditions for teacher promotion. In addition, master teachers are responsible for doing action research. To encourage instructors to pursue research, DepEd Order No. 24 s. The Basic Education Research Fund (BERF) was established in 2010, with the goal of providing financial help to anyone interested in conducting research. However, despite this financial support of two million pesos per year for each region, only a few continue to conduct research, as evidenced by the DepEd record, which shows that only 12 research requests have been accepted and completed since 2010, when the national government began allocating funds. It illustrates that, despite encouragement, the research culture in basic education institutions has yet to be fully adopted.

DepEd still faces a significant issue in persuading teachers to pursue research. The topic of why so few teachers, particularly master teachers, engage in research remains unresolved. Although there may be plausible answers to this question, it is important to investigate the aspect that motivates certain people to complete tasks and achieve goals that are related to their capability. Perhaps their research capability has not yet been investigated and developed. Individuals, organizations, and systems' research competency is defined as their ability or potential to conduct

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/25feb090

and disseminate high-quality research in an effective and efficient manner. It also refers to a process of human and institutional development that results in increased talents and encourages beneficial research. This study focuses primarily to determine the level of research capability of the master teachers in Claver, Gigaquit, and Bacuag District Schools of Surigao del Norte, Philippines and to establish relationship towards different potential driving forces such as demographic profile, knowledge about research, professional development, autonomy and flexibility, attitude towards research, recognition, incentives and administrative support.

II. CONCEPTUAL FRAMEWORK

Sustainable Training for Academic Rigor among Teachers and Students (STARTS) is an extension project that aims to provide capability training in conducting qualitative and quantitative research among the teachers this project was based on the study of Candelario-Aplaon (2017), which concluded that the teachers needed training on conducting research because their knowledge level on the conduct of research is below the expected level (Candelario-Aplaon, 2017). Furthermore, Practical Research 1 and 2 are applied track subjects in the senior high school curriculum (Official Gazette of Republic of the Philippines, 2013). It also refers to a process of human and institutional development that leads to increased talents and encourages the performance of beneficial research. As a result, secondary school teachers must be educated on research methods. Furthermore, research is a required domain in the Individual Performance Commitment and Review (IPCR), a key performance indicator in the new Result-Based Performance Management System (RPMS), and a prerequisite for progress.

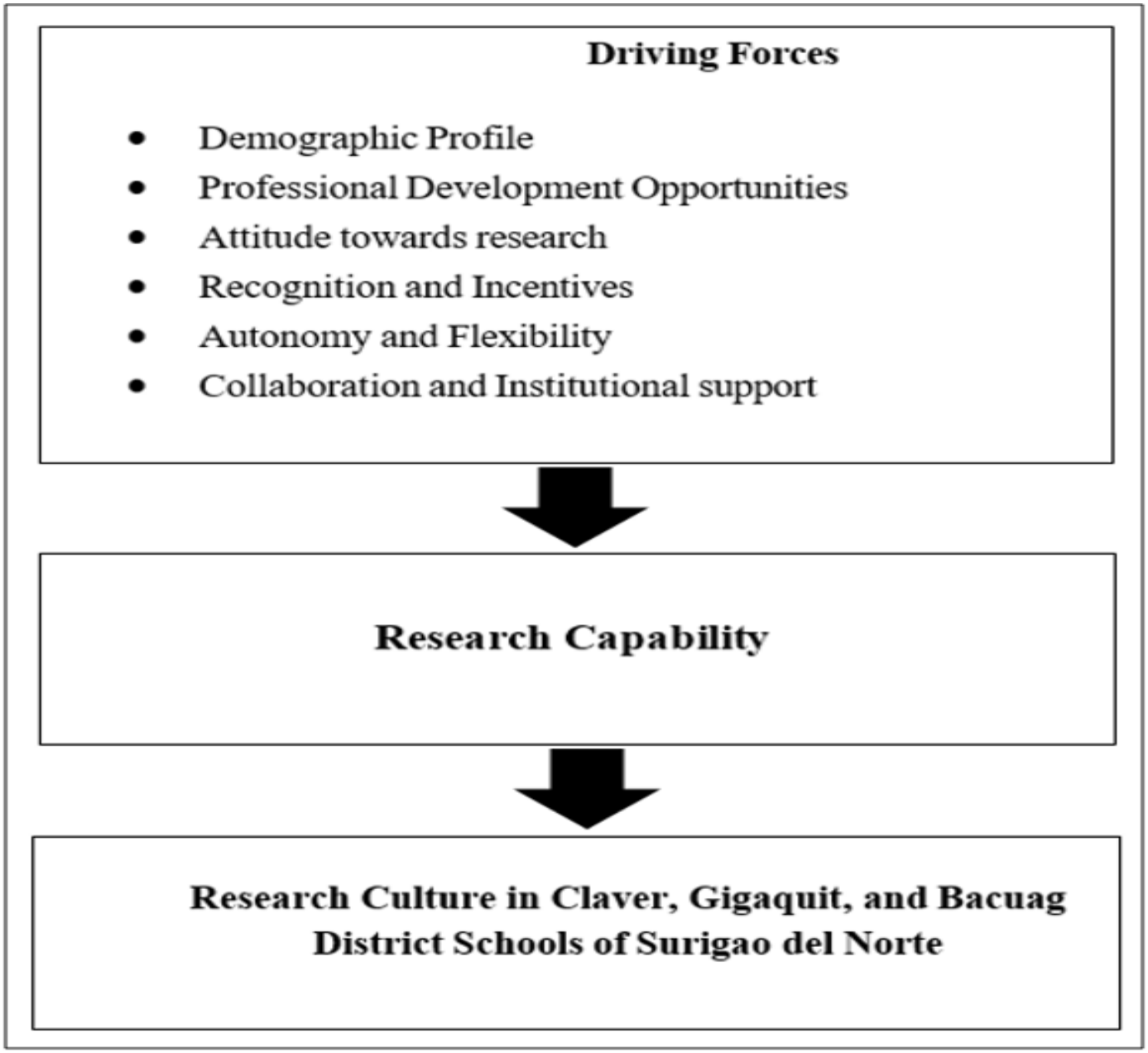

Fig 1 Research Paradigm

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/25feb090

A. Statement of the Problem

This study was intended primarily to determine the level of research capability of the master teachers in Claver, Gigaquit, and Bacuag District Schools of Surigao del Norte, Philippines and to establish relationship towards different potential driving forces such as demographic profile, knowledge about research, attitude towards research, professional development and collaboration and institutional support recognition and incentives autonomy and flexibility.

➢ *The following Research Questions Helped Shape the study's Direction:*

- Does respondents' profile affect their research capability?
- How does respondents' understanding of research impact their research capability?
- How does respondents' attitude towards research affect their research capability?
- Does administrative and institutional assistance greatly impact respondents' research capability?
- Do elements like personal profile, attitude towards research, professional growth recognition, incentives, and institutional support have a substantial impact on respondents' research capabilities?

➢ *Hypothesis*

- *At 0.05 Level of Significance, it is Hypothesized that:*

✓ H0: There is no significant relationship between the driving forces (personal profile, attitudes towards research, knowledge about research, collaboration and support, autonomy and flexibility and administrative support) towards the research capability of Master Teachers in Claver, Gigaquit, and Bacuag District Schools of Surigao del Norte.

✓ H1: There is a significant relationship between the driving forces (personal profile, attitudes towards research, knowledge about research collaboration and support, autonomy and flexibility and administrative support) towards the research capability of Master Teachers in Claver, Gigaquit, and Bacuag District Schools of Surigao del Norte. and institutional support) towards the research capability of Master Teachers in Claver, Gigaquit, and Bacuag District Schools of Surigao del Norte.

B. Significance of the Study

The result of this study would be beneficial to the following members of the educational community:

➢ Department of Education
➢ Elementary & Secondary School
➢ Master Teachers
➢ School Administrator
➢ Future Researcher

C. Scope and Limitations of the Study

This study used a descriptive type of research since the study is concerned with the research capability of the respondents in terms of their research production and publication towards building a research culture. The study was conducted in the selected private and public schools both form elementary and secondary level in Claver, Gigaquit, and Bacuag District Schools of the Division of Surigao del Norte, Philippines.

III. MATERIALS AND METHODS

This chapter present research design, research environment, respondents, research instruments, ethics and data gathering procedure and data analysis.

➢ *Research Design*

A survey questionnaire was utilized to collect data and explain the current situation of the research population. In this case, the study population consists of master instructors from Claver, Gigaquit, and Bacuag District Schools in Surigao del Norte, Philippines, whose level of research competence has been described, as well as the relationship between numerous circumstances and their capability.

The questionnaire provided detailed information on respondents' profiles, research capabilities, professional development, collaboration, recognition and incentives, autonomy and flexibility, and institutional administrative assistance.

The correlation method was used to identify characteristics influencing master teachers' research capabilities. Purposive sampling was used in the study, with 10 respondents from each municipality at the elementary and secondary levels for a total of 70 respondents.

Data will be analyzed using statistical tools, including Pearson Product Moment Correlation Coefficient, Regression analysis, ANOVA, arithmetic mean, frequency count, and percentage, using the offline Jamovi app to test hypotheses.

The researchers conducted descriptive research to assess respondents' research output and publication capabilities, with the goal of fostering a research culture. The study was carried out in selected private and public elementary and secondary schools in Claver, Gigaquit, and Bacuag District Schools, Division of Surigao del Norte, Philippines.

➢ *Research Environment*

The Province of Surigao del Norte is located northeast of Mindanao in the Philippines. The researcher will visit selected
public and private schools both form elementary and secondary school of the three (3) municipalities of Surigao del Norte namely: Claver, Gigaquit, and Bacuag to float the survey questionnaire and get a sample from three municipalities.

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/25feb090

Fig 2 Research Environment

➢ *Respondents*

The respondents of this research are the master teachers level in Claver, Gigaquit, and Bacuag District Schools of Surigao del Norte both from elementary and secondary school. A total of 70 respondents

Table 1 Distribution of Respondents

Municipality	**Population**
CLAVER	25 respondents
GIGAQUIT	25 respondents
BACUAG	20 respondents

➢ *Research Instrument*

- *Data Analysis*

Statistical analysis included descriptive and inferential methods. The demographic profile is described using descriptive statistics tools such as frequency count and percentage. The researchers utilized the weighted arithmetic mean to calculate the weight of their responses to questions measured using the Likert scale.

Inferential statistics, including Pearson Product Moment Correlation Coefficient, Regression analysis, and ANOVA, were used to analyze the relationship between the dependent variable (research capability) and the independent variables (demographic profile, knowledge of research, attitude towards research, and institutional support). All statistical analyses were performed using the JAMOVI program.

IV. RESULTS

The results section will present the findings from the interviews, focus groups, and document analysis.

Table 2 The Master Teachers' Demographic Profile

		f	**Percentage**
Age	25-35	30	42.86
	35-46	25	35..71
	47-58	12	17.14
	59-above	3	4.29
Gender	Male	30	42..86
	Female	40	57.14
Educ. Attainment	Bachelor's Degree	30	42.86
	Masters Graduate	24	34.29
	Doctorate Degree	16	22.86
No. of years in service	1-10	53	75.71
	11-20	12	17.14
	21-30	2	2.86
	31-40	3	4.29

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/25feb090

Table 2 exhibited the respondents' demographic profile, which included age, gender, educational attainment, and number of years of service. It can be noted that the age group 25-35 had the highest percentage of 30s (42.86%). On the other hand, the age bracket with the lowest count of 3 (4.29%) is 59 and above. This statistic demonstrated that the responders are primarily young faculty members. Males with 30 counts (42.86%) and females with 40 counts (57.14%) were evenly distributed. Faculty members' educational attainment presented a majority of bachelor's degree with 30 counts (42.86%) while 16 counts (22.86%) are faculty members who finished doctoral. Most of the respondents were within the span of 1-10 years in service having 53 counts (75.71%) while 2 (2.86) respondents already rendered within the span of 31-40 years in service.

Based from the data being shown in the table, it can be implied that most of the respondents are young, new in the service, and majority of the respondent's highest educational attainment is bachelor's degree. This can be corroborated by the study of Tarigan & Wimbarti (2011) wherein young members in the faculty family has a good ground to develop research skills by attending trainings and programs because of their compositions such that they manage to be active in every research endeavor and their enthusiasm to learn new things (Punia & Bala, 2021). The capacity to conduct research also affected by the respondents' educational attainment as this predictor interact between the acquired knowledge and behavior (Berkowitz et al., 2017).

The study of Salom (2013) highlighted that the educational attainment gained a significant relationship as to how they expected to perform their function as research instructor. Given the respondent's highest educational attainment, it can be implied that institution should consider to encourage these young faculty members to engage in any professional development programs to acquire more knowledge and skills in doing research (Zhao, 2017; Wong, 2019).

Table 3 Master Teachers' Exposure to Research

		f	**Percentage**
No. of years in conducting research	1-5	65	92.86
	6-10	3	4.29
	11-15	2	2.86
	0	56	80
	1	7	10
No. of Papers published	2	2	2.86
	3	1	11.43
	4	3	4.29
	5	1	1.43
	0	38	54.29
No. of Local and International Conferences Attended	1-10	25	35.71
	11-20	3	4.29
	21-30	3	4.29
	31-above	1	1.43
	0	44	62.86
No. of papers completed but were not published	1-5	18	25.71
	6-10	7	10.00
	11-15	1	1.43

Table 3 displayed the respondents' exposure to research. The majority of respondents (92.86%) were new to conducting research and had 1-5 years of experience. This is consistent with the amount of newly hired and young faculty members. There were only two (2.86%) who had been conducting research for 11-15 years. While the majority of respondents, 56 (80%), were unable to publish a research article, 7(10%)did so once. In terms of the number of local and international conferences attended, 38 faculty members (54.29%) did not attend any. This also applies to the number of articles completed but not published, as the majority of respondents never wrote an article.

The numbers in the table indicate that various factors are interacting, since one may have a substantial association with another or with all. The degree to which one variable is at its highest or lowest may drag the other variable to the same level. The findings are consistent with Cardona's (2020) study, which found that engaging in any research activities increases a teacher's productivity rate in terms of research publication because it promotes skills and broadens the perspective on research initiatives (Durand et al., 2017) and their creation. Furthermore, the level of research skills and ambitions of the instructors are the key characteristics (Konig et al. 2020) that one should examine because these may affect their efficiency and effectivity to establish transfer of learning and acquire the necessary outcome in research production. The study of Beerens (2000) suggested that professional growth provides a strong foundation of acquired knowledge and skills especially in research innovation therefore, institution should provide grounds for their college instructors to engage in different research activities. This curriculum has a positive impact not only on the instructors' projected performance and output, but it can also prepare them to create research-based education and linkage.

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/25feb090

Table 4 Level of research capability among master teachers

Statement	Mean	SD	Description
I know well the Nature of Educational Research.	2.96	0.72	Capable
I can understand the language of Research.	2.92	0.62	Capable
I am familiar with the famous authors in Researches.	2.59	0.64	Less Capable
I know how to make a research title.	2.99	0.66	Capable
I know how to write an introduction to an article.	2.93	0.74	Capable
I know how to look for Literature and Studies.	3.08	0.78	Capable
I know how to write a review of related literature.	3.00	0.87	Capable
I know how to formulate research question/s.	2.97	0.93	Capable
I know how to set the parameters of the study.	2.76	1.03	Capable
I know how to make conceptual and theoretical frameworks.	2.89	1.12	Capable
I can decide what appropriate research design	2.86	1.19	Capable
I know the kind of sampling technique I need to utilize.	2.77	1.33	Capable
I know what is population and sample.	3.01	1.35	Capable
I can identify a particular statistical tool to be used in my study.	2.75	1.54	Capable
I know how to validate an instrument	2.69	1.62	Capable
I know how to sustain trustworthiness of the data gathered.	3.08	1.71	Capable
I know how to conduct interview	3.01	1.80	Capable
I know what are the ethical considerations in conducting research.	3.07	1.91	Capable
I know how to analyze results.	2.89	2.07	Capable
I know how to read tables and other graphical representations	3.01	2.13	Capable
I know how to use software in analyzing the data	2.66	2.29	Capable
I know how to corroborate the results	2.80	2.40	Capable
I know how to make conclusions.	3.03	2.47	Capable
I know to how to do in-text citation.	2.99	2.63	Capable
I know how to paraphrase and summarize.	3.15	2.69	Capable
I know how to use APA 7th Edition in doing citation.	2.89	2.87	Capable
I know how to make my paper publishable.	2.68	3.02	Capable
I know how to scrutinize journals.	2.76	3.12	Capable
I know how to present my paper in the international conferences.	2.72	3.26	Capable
I am good in making the abstract of the study.	2.86	3.32	Capable

Legends: 1.00-1.80 Not capable; 1.81-2.60 Less capable; 2.61-3.20 Capable; 3.21-4.00 Very Capable

The findings implied that respondents are competent of conducting research because they are familiar with practically all of the research techniques. The findings above are consistent with Hill and Haigh's (2012) study, in which the respondents were active researchers. However, there is a need to boost research output by raising the number of publications. The knowledge and skills to conduct research are available, but this does not guarantee that they will be able to complete the study because other variables interact with it, and behavior plays a significant role in the interaction. According to the study of Van Eekelen (2006) highlighted that "a will to learn" of the teachers is significant in delivering performance, acquire new set of skills, and being proactive because this gives them the drive to explore beyond what is present and acquired. It can also widen the lens of understanding to consider challenging pathways such as research endeavors as an opportunity to develop professionally and produce a research based academic performance (Guskey, 2021).

Table 5 There is a Substantial Connection among Master Teachers' Research Capabilities, Demographic Profile, and Research Exposure.

Independent Variables Demographic Profile and Exposure to Research	Dependent Variable Research Capability		
	r value	*p value*	Remarks
Age	0.1814	0.14	Not Significant
Gender	-0.0704	0.57	Not Significant
Educational Attainment	0.2715	0.03	Significant
No. of years in service	0.2507	0.04	Significant
No. of years in conducting research	0.3498	0.00	Significant
No. Papers published	0.4453	0.00	Significant
No. of Local and International Conferences Attended	0.2688	0.02	Significant
No. of papers completed but were not published	0.2266	0.60	Not Significant

Significant level at 0.05

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/25feb090

Table 5 revealed a high link between faculty members' research capability, demographic profile, and exposure to research. The three independent variables, age, gender, and the number of papers completed but not published, generated 0.14, 0.57, and 0.60, respectively, all greater than the significance level of 0.05. This shows that the research capability is not significant. Meanwhile, educational attainment, years in service, years conducting research, number of papers published, and attendance at local and international conferences all had a significant relationship with research capability (p values of 0.03, 0.04, 0.00, 0.00, and 0.02, respectively).

Table 6 Driving forces

	F	**Percentage**
Professional Development	65	92.86
Opportunities		
Collaboration and Support	62	88.57
Recognition and Incentives	60	85.71
Autonomy and Flexibility	57	81.43
Administrative support	53	75.71

➢ *Driving Forces*:

- Professional Development Opportunities (92.86): Majority sought training, workshops, and conferences.
- Collaboration and Support (88.57%: Most valued peer support, mentoring, and networking.
- Recognition and Incentives (85.71%): Many motivated by awards, promotions, and financial rewards.
- Autonomy and Flexibility (81.43%): Most appreciated freedom to design and manage time.
- Administrative support (75.7%): Most recognized school administration's role in facilitating research.

➢ *Implications:*

- Provide regular training and professional development opportunities.
- Foster collaborative environments and mentorship programs.
- Offer recognition and incentives for research achievements.
- Grant autonomy and flexibility in research design and implementation.
- Recognized school administration.

➢ *Recommendations*:

- School administrators: Support teacher research through resources and incentives.
- Educational institutions: Offer research training and mentorship programs.
- Policymakers: Develop policies promoting teacher research and collaboration.

V. DISCUSSION INTERPRETATION OF RESULTS:

The findings highlight a complex interplay of factors that influence master teachers' research capabilities in Claver, Gigaquit, and Bacuag District Schools of Surigao del Norte. Intrinsic motivation, such as personal commitment to educational improvement, plays a significant role in encouraging teachers to pursue research. However, extrinsic factors, such as institutional support, recognition, and available resources, are critical in enabling research engagement.

The barriers identified—particularly time constraints, limited resources, and lack of research training—are significant challenges that need to be addressed to create an enabling environment for research. These barriers reflect broader systemic issues within the Claver, Gigaquit, and Bacuag District Schools of Surigao del Norte and the Philippines' education system.

➢ *Implications for Practice:*

Policy Recommendations: The study suggests that policies at the regional and divisional levels should emphasize professional development programs focused on research. Creating clear pathways for career advancement through research can also motivate teachers.

Research Culture Development: Building a research culture requires not only incentivizing individual teachers but also fostering a collaborative and supportive research environment within schools. This can be achieved by organizing research forums, mentoring programs, and fostering partnerships with local universities.

Institutional Support: Administrators should prioritize allocating time and resources for teachers to engage in research. Establishing a system of research awards and public recognition can motivate teachers to participate in research.

➢ *Limitations:*

The study is limited to master teachers in Claver, Gigaquit, and Bacuag District Schools of Surigao del Norte, and the findings may not be generalizable to other regions or educational settings. The qualitative nature of the research may limit the breadth of responses; however, it provides in-depth insights into teachers' experiences.

VI. CONCLUSION

This study highlights the importance of understanding the driving forces behind master teachers' research capabilities and the challenges they face. By addressing these issues and implementing strategic interventions, the

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/25feb090

Claver, Gigaquit, and Bacuag District Schools of Surigao del Norte can foster a more robust and sustainable research culture that will benefit not only teachers but also the broader educational community. Based on the result we can say that the respondents are more into research activities and because of so many factors that lead them to motivate and pursue research especially in professional development.

ACKNOWLEDGEMENT

This research would not have been possible without the guidance and support of several individuals. First, Thank to our Almighty God for giving me the strength, wisdom, and perseverance to complete this study. I am deeply grateful to my research advisor, Dr. Mauricio S. Adlaon, for his invaluable guidance, constant support, and insightful feedback, which were crucial to the success of this work. My sincere thanks also go to the master teachers in Claver, Gigaquit, and Bacuag Districts of Surigao del Norte, whose time, knowledge, and candid responses made this research possible. I appreciate the cooperation of the Division of Surigao del Norte's officials and staff, whose assistance facilitated the research process. To my family, especially my wife and daughter, I am forever grateful for their unwavering love, patience, and support. They have been a constant source of motivation throughout this journey. I also thank my friends and colleagues for their encouragement and support, which made this journey less daunting. Lastly, I dedicate this research to the educators of Surigao del Norte, whose dedication continues to inspire future generations of learners. Thank you all for your support and belief in the importance of this study. May we continue to work toward the betterment of education in the Philippines.

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