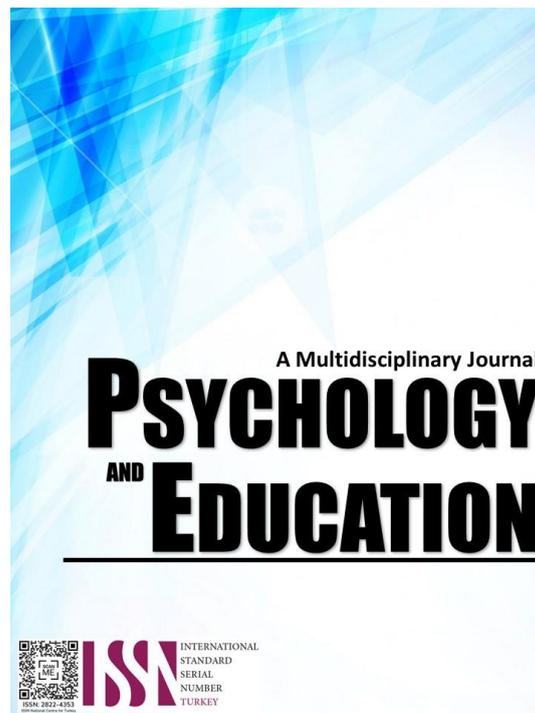


**RESEARCH CAPABILITY OF TEACHERS IN PUBLIC  
SECONDARY SCHOOLS IN THE PROVINCE OF  
MASBATE, PHILIPPINES: BASIS FOR  
ENHANCEMENT PROGRAM**



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## Research Capability of Teachers in Public Secondary Schools in the Province of Masbate, Philippines: Basis for Enhancement Program

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### Abstract

Teachers in the Philippine basic education sector are encouraged to promote an evidence-based policymaking culture through research. They are expected to have basic or advanced skills in conducting investigations, surveys, or experiments, as well as data analysis, in their respective teaching fields. The researcher assessed the perceived research capability of secondary school teachers in Masbate (n=1,637) during the COVID-19 pandemic and the need to improve their research skills in terms of formulating, conceptualizing, writing, constructing, and conducting research in this descriptive survey. The purpose of this study was to assess secondary school teachers' research capability, as well as the barriers they encountered and the interventions they implemented. Teachers were found to be "slightly capable" of conducting research. As a result of the findings, it is recommended that all teachers participate in a research capability enhancement program. The majority of teachers (87.72 percent) lack scientific training but are willing to participate in any research endeavor. Among the challenges encountered, solutions included participation in research trainings (84.30 percent), school-based mentoring (78.31 percent), and collaboration with experts (77.64 percent). The findings lay the groundwork for school officials to develop a functional growth plan for becoming more responsive and effective in teaching research, which is critical for students to develop critical thinking skills. Additionally, schools should provide relevant training to strengthen school-level mentoring, foster collaboration, and mandate the acquisition, creation, and distribution of current research guides to all teachers.

**Keywords:** *research capability, department of education, challenges, interventions, enhancement program,*

### Introduction

In an ideal world, educational research would contribute significantly to improvement, whether through theory development or stimulating ideas for innovative practices, as described in Livingstone (2005) of the UNESCO-International Institute for Educational Planning (IIEP) on Basic Elements of Research Design. The majority of government and non-government organizations are expected to develop research agendas in order to address societal problems and contribute to national development (Calderon & Gonzales, 1993), and these agendas must be centered on the state's proclaimed policy under the 1987 Philippine constitution to "create, sustain, and support a comprehensive, sufficient, and integrated system of education relevant to the needs of the people" (Calderon & Gonzales, 1993).

One of the stated goals for meeting global demands and catching up with neighbouring countries is to raise educational standards. The majority of studies have demonstrated that effective learning occurs when teachers are effective. As a result, it is critical to improve the quality of teachers. Regrettably, several studies have discovered that a lack of teacher development programs is one of the contributing factors that must be addressed (Zhang, 2016;

Banilower, Heck, & Weiss, 2007; Ciocon, 2016, Lucernas & Delavin 2019;). Furthermore, the value of teacher education (Hine, 2013; Hong & Lawrence, 2011; Young, Rapp, Murphy, 2010; Vogrinc & Zuljan, 2009; Hien, 2009) and its impact on classroom instruction (Mahani, 2012; O'Connor, Greene, & Anderson, 2006). Teachers serve as change catalysts and conscientious change agents. Others may underestimate them, but their influence at work is undeniable: the future of the nation is in the hands of schools, and teachers have the power to make or break it.

Conducting research contributes to the continuous improvement of education. It provides validated evidence to help ensure that educational policy decisions are consistent. Without a doubt, this is what has brought us to this point (Boykin, 1972). The Governance of Basic Education Act of 2001 (Chapter 1, Section 7(5), R.A. 9155) strengthens the way educational studies are conducted in secondary schools. It directs the Department of Education (DepEd) to "conduct (national) educational research and studies" that will serve as the foundation for necessary reforms and policy inputs. Additionally, the DepEd Order 43, s.2015 emphasizes the importance of research in purifying people's activities and lives, with an emphasis on performance improvement and information gathering in particular. It explains how to



solve problems methodically and objectively, which is necessary for our teachers to solve school problems in a systematic manner.

Educational research is primarily concerned with comprehending, clarifying, predicting, and regulating human behaviour. It has gathered information through scientific research methods in order to improve instructional planning, decision-making, teaching and learning, curriculum development, children's and youth's comprehension, educational media use, school organization, and educational management (Boykin, 1972). Curriculum development and improvement, education of slow learners, identification of psychological characteristics of physically disabled students, and adaptation of learning methods to the needs of individual learners have all benefited from research.

Every educator is expected to adhere to the Basic Research Agenda in the Philippines (DepEd 2016). They are encouraged to conduct basic or applied research as it is a requirement for advancement in their careers. Specifically, all master teachers are expected to conduct in-depth studies or action research on instructional issues as specified in their Position and Competency Profile. If the school principal lacked the expertise to conduct or even complete research, his or her reputation as an assessor of faculty research would suffer. As a result, he or she should be skilled at conducting research. Similarly, secondary teachers who teach research subjects or subjects that require research must develop the necessary skills for conducting research.

Unfortunately, only a small percentage of the 3, 819 total secondary school teachers in the Division of Masbate Province were able to conduct research. It's frustrating to see how little progress has been made in terms of research and development. The data strongly suggests that a research study be conducted to establish a foundation for addressing the issue.

In this regard, the researcher designed this study to assess respondents' research capability using a standard survey questionnaire anchored in DepEd Order No. 16, s. 2017, the difficulties encountered while conducting research, and the suggested interventions that will serve as the foundation for developing a research capability enhancement program.

## Methodology

The analysis was conducted using a descriptive research design that incorporated both qualitative and quantitative data. A standard survey questionnaire and a purposive convenience sampling technique were used to collect data in accordance with the indicators specified in D.O. No. 16, s. 2017. The study surveyed 1,637 public secondary school teachers in Masbate Province's District.

The researcher assessed respondents' research capability using weighted mean and evaluated the findings using adjectival interpretation. The weighted mean was used to determine the distribution of scores on respondents' research capability across a set of data. The weighted mean of all the measures at each level was added and divided by the total number of cases to determine secondary school teachers' overall research capability.

The difficulties encountered during the research process were statistically described using frequency, percentage, and ranking, as well as the respondents' suggested solutions. The data were analyzed to determine their frequency. The significance of the qualitative data was determined using the percentage technique and ranking. The responses to the challenges and suggested interventions were analyzed on a thematic level.

## Results and Discussion

The data collected were tabulated to reflect the respondents' indicators of research capability, as well as the mean and equivalent adjectival value of the first item on the level of research capability of teachers in public secondary schools in Masbate Province.

Furthermore, the data were tabulated for items under the second to third problems on the challenges met while conducting research, as well as suggested interventions to address the challenges encountered, and was accompanied by the respondents' personal perspectives to help explain the top three (3) emerging themes with the highest and lowest percentage of frequencies.

### Level of the Research Capability of Teachers in Public Secondary Schools in the Province of

## Masbate

Table 1. *Level of the Research Capability of Teachers in Public Secondary Schools in the Province of Masbate*

Indicator <i>I am capable of...</i>	Secondary	
	Mean	Adjectival Value
formulating research title	2.11	Slightly Capable
writing rationale/introduction/background of the study	2.10	Slightly Capable
writing the research conceptual framework and research paradigm	2.12	Slightly Capable
writing statement of the problem	2.12	Slightly Capable
formulating hypothesis/hypotheses	2.11	Slightly Capable
writing significance of the study	2.21	Slightly Capable
writing scope and limitation of the study	2.10	Slightly Capable
writing definition of terms	2.11	Slightly Capable
writing the review of related literature and studies	2.01	Slightly Capable
writing a research proposal	2.01	Slightly Capable
writing research methodology	2.09	Slightly Capable
determining the research design to apply in my study	1.84	Slightly Capable
adopting/ constructing/ modifying research instrument	2.09	Slightly Capable
writing abstract	2.08	Slightly Capable
writing results and discussion	2.12	Slightly Capable
writing conclusions	2.00	Slightly Capable
writing recommendation	2.09	Slightly Capable
applying APA format	2.10	Slightly Capable
Overall Weighted Mean	2.07	

According to the data presented above, secondary teachers' research abilities are "slightly capable" across all indicators. The corresponding overall weighted mean is 2.07, which indicates that the individual is slightly capable. According to the data, the majority of respondents are only slightly capable of formulating, conceptualizing, writing, determining, and constructing various components of basic research. Without the knowledge and skills necessary to complete these critical components of the research study, teachers would be unable to write a research paper successfully. This is primarily why, out of the 1,637 secondary teachers in Masbate Province, only a few were able to submit and complete a research proposal. They were slightly capable of developing a title, a conceptual framework, a problem statement, a hypothesis, a review of related literature, a proposal, research methods, and writing results and discussion, as well as adopting / developing / modifying research instruments. The study's findings are comparable to those of Manuel Caingcoy's study, *Research Capability of Teachers: Its Correlates, Determinants, and Implications for Continuing Professional Development*, which found that the majority of teachers were also slightly capable on various indicators.

Teachers are undoubtedly confronted with a variety of educational maladies, and research is critical for combating declining educational quality, all the more so in this time of pandemic, as highlighted in the 2020 Global Education Monitoring Report. Teachers are teachable and adaptable in a wide variety of ways. They could solve school problems and contribute to

the system's growth performance if they were only mentored or guided on how to conduct research properly (Belanger, 1992). According to one journal's citation in the ERIC Digest, teachers should collaborate in revising curriculum, improving their work environment, professional teaching, and developing policy. According to the Asian Productivity Organization, teachers can reverse the downward trend in the Philippines' educational performance by increasing research productivity.

Secondary teachers frequently encounter difficulties in the majority of the district of Division of Masbate Province when it comes to instruction, student outcomes, community connections, and personal and professional growth and development. Research is critical for effectively addressing these issues. As a result, they must actively pursue opportunities to improve their research abilities. According to one of my interviews, research trainings have been conducted, but only a select few or identified participants have been permitted to attend, the majority of whom are master teachers and school heads (D.O. No. 43, s. 2015). However, those who teach research subjects at the secondary level, as well as other teachers interested in conducting research, were only given a limited number of slots to participate in the training. The department encourages all teachers, regardless of academic rank, to pursue research, and thus all teachers must be given the opportunity to participate in research trainings, particularly those aspiring to be master teachers.

According to one of the respondents, "Conducted teacher training should be outcome-oriented; for example, if teachers attended a research training, they should have developed research proposals or completed research following the training's recommendations, or there should be an assessment evaluating the impact of the trainings attended."

The appropriate authorities should collaborate to gradually assist teachers in developing the skills necessary to conduct research in the future for the field of education to continue to advance. Teachers must keep these young children in mind as they pursue professional development. They can produce developmentally appropriate practices as a result of their research endeavors through research. Additionally, research earns them a high number of points toward promotion to master teacher status, as stated in the recently issued DepEd Order No. 66, s. 2007, which emphasizes the importance of matching research themes to research agendas according to level of governance. They should initiate research through

action or applied research. This must be acknowledged/noted/endorsed by the School Head, reviewed by the Schools Division Research Committee, and recommended and approved by the Assistant Schools Division Superintendent and Schools Division Superintendent, respectively.

Additionally, as part of the K to 12 Curriculum implementation, practical research subjects are being offered in junior and senior high school in accordance with the 2013 Enhanced Basic Education Act. Secondary teachers must therefore possess sufficient knowledge, skills, and attitudes toward research in order to have an impact when teaching research subjects. The importance of research in nurturing and producing upright and competent graduates cannot be overstated (Tamban & Maningas, 2020). Unfortunately, there are no guidelines or requirements for assigning teachers to research subjects in junior and senior high school, which means that anyone from the group can handle research subjects. As a result of this study, key officials may develop a policy or establish qualifications and requirements prior to assigning a faculty member to handle research subjects. *"In high school, students are taught how to conduct research so that by the time they reach the tertiary level, they will have gained some experience and developed the necessary skills. They are expected to be led by their research teachers,"* one secondary level respondent stated.

Students will not learn optimally or develop research skills if their teachers lack research capabilities. Teachers may attend enhancement trainings in order to acquire sufficient and appropriate knowledge, skills, and values for research (Cruthaka, 2016). This is also consistent with the findings of Victoria Elip Tamban and Ofelia B. Maningas' study, entitled *Research Capability of Public-School Teachers: A Basis for Research Capability Enhancement Program*, which recommended the need for intensive seminar/training write-shops for teachers on technical writing of completed research. Additionally, Gareth Rees, Stephen Baron, Ruth Boyask, and Chris Taylor stated in their study *"Research Capability Building, Professional Learning, and the Social Practices of Educational Research"* that in order to achieve more realistic expectations, alternative approaches must be developed that acknowledge the constraints of the current social organization of educational research.

The top officials of the Department of Education must ensure that secondary school teachers who teach research subjects have strong research abilities. They must ensure that schools have adequate resources to

conduct research-based instruction effectively in the classroom. They can also take advantage of the numerous online trainings and webinars available to further their education and development. Furthermore, it would be extremely discouraging if teachers of research subjects had never conducted a single research study. Additionally, the teachers' reputations should be considered. Those in positions of authority should conduct a review of the curriculum and make appropriate interventions. Numerous institutions of higher education have experts in conducting and teaching research, and they can benefit from these institutions' extension programs.

Teachers generally want the best for their students, as their success is contingent upon their success. The Department of Education may place a premium on teachers' ability to conduct research. Assisting teachers in developing the necessary knowledge, skills, and attitudes for conducting research benefits the institution's research program.

### Challenges Met in Conducting Research

Table 2 illustrates the difficulties faced by teachers in Public Secondary Schools in the Province of Masbate and is accompanied by a descriptive analysis based on statements made by respondents during the interview.

Table 2. *Challenges Met in Conducting Research Among Teachers in Public Secondary Schools in the Province of Masbate*

<i>Problems and Challenges</i>	<i>Frequency</i>	<i>%</i>
Inadequate Scientific Education	1436	87.72
Management of Time	1257	76.79
Lack of a Specific Deadline	769	49.98
Ample Literature	878	53.63
Implementing a high standard of writing in a literature review	1094	66.83
Inadequate Data	1008	61.58
Insecurities	679	41.48
The focus is either too broad or too narrow	552	33.72
Lack of Libraries	354	21.62
Inadequate Resources	987	60.29
Supervisors' Lack of Support	532	32.50
Sustaining Productivity in Writing	794	48.50
Career Concerns	217	13.26
Educating	975	59.56
Friction Between Colleagues	127	7.76
Promoting Participation	786	48.01
Absence of a culture of collaborative research	547	33.41
Alignment of Survey and Research Questions	450	27.49

The data presented in table 3 were the overarching themes that emerged naturally during the respondents' interviews as the challenges met in conducting research. Whereas the perceived top three (3) challenges with highest percentage of frequencies were inadequate scientific education, management of time, and implementing a high standard of writing in a literature review.



As reflected on the table, the majority of respondents said that they have inadequate scientific education and that only a small number of teachers were sent to research-related trainings. Hence, according to several respondents the second most common barriers in conducting research is management of time and this is especially true for teachers who are overburdened with school work and other tasks in school. As exclaimed by one of the respondents, *“The school principal should relieve teachers doing research of given tasks so that they can concentrate on completing the research project!”*. Furthermore, the study's findings demonstrated the consistency with which a literature review should be written. Whereas, the third reason was the majority of teachers are concerned with how to conduct an effective literature review. As found out in the interview, majority of researchers abandon research once they are faced with the task of reading a large volume of literature in order to write a qualitative report. One of the respondents said during the interview, *“I've read numerous references and studies in preparation for writing a qualitative research review, but my work remains a mess.”* Relatively, a review of related literature is a necessary component of any rigorous research, whether qualitative or quantitative, because it provides a solid theoretical foundation for the study. A researcher creates the academic vacuum that his or her research will fill by deftly reviewing related literature and justifying the research's necessity and significance (Hefferman, 2016 & Bowen, 2009).

While the perceived top three challenges with the lowest percentage of frequencies were friction between colleagues, career concerns and lack of libraries. Frequently, respondents stated that they did not experience friction between colleagues. They handle their situations professionally. Several coworkers are also supportive and offer guidance to teachers conducting research. In some districts, teachers frequently assist and participate actively in their colleagues' research because they believe the findings will resolve common problems at their school. Others are ecstatic for them, as only a small percentage of teachers have the fortitude to conduct research. At times, there were career concerns as teacher's employment does not correspond to their baccalaureate degree and area of specialization, and some of them would struggle to conduct research in that field even if they desired to do so due to a lack of necessary skills and expertise. They may lack a comprehensive grasp of teaching and other educational values. Others are unmotivated in their chosen professions because they are not fulfilling their true desires. They are

preoccupied with the prospect of changing departments due to dissatisfaction with their current role. While everyone can now access everything via the internet, this is only beneficial to those who live in urban areas where the connection is secure and there are no power outages. Some schools in the Division of Masbate Province lack libraries, which explains why some researchers struggle to read reference materials. Certain online resources require payment to access, which increases their financial burden. The province lacks an established digital library on which researchers can rely whenever they conduct research.

**Interventions to Address the Challenges Met**

Table 3, shows the suggested interventions of respondents to address the encountered problems in conducting research.

Table 3. *Interventions to Address the Challenges Met*

<i>Interventions</i>	<i>Frequency</i>	<i>%</i>
Manage Resources Wisely	1063	64.94
Mentoring on a school-based basis	1282	78.31
Utilize Your Time Wisely	614	37.51
Utilize Technology to Your Benefit	357	21.81
Self-Care	906	55.35
Continue to read	879	26.85
Enhance Your Writing Ability	804	49.11
Conduct a Review of Existing Research	598	36.53
Determine the study's design	269	16.43
Establish a Research Base	608	37.14
Take Notice of the Data	483	29.51
Maintain Concentration	522	31.89
Take into account biases	620	37.87
Collaborating with Additional Institutions	1271	77.64
Consider the Particulars	246	12.03
Attendance at Research Training Sessions	1380	84.30
Organize Financial Resources	499	30.48
Develop Study Techniques	681	38.55
Keep a realistic perspective	792	48.38

The top three suggested interventions to solve the faced problems of teachers with the highest percentage of frequencies were attendance at research training sessions, mentoring on a school-based basis and collaborating with additional institutions.

The majority of respondents recommend attending in research training sessions to get new information and skills in doing research and to stay up to date on current advancements in the field. Additionally, this increases instructors' self-esteem, motivation, and confidence. This provides an appropriate avenue for

teachers to clarify specific concepts and seek assistance with particularly difficult sections of the research. Those who have already completed research proposals will be able to confirm the accuracy of their work or improve certain aspects of their proposal. While the second suggested intervention was the conduct of school-based mentoring to properly address the school-based problems and minimized the risk of accidents due to the frequent outside school travels of teachers. They would prefer to be mentored by a researcher or a school expert. They can accomplish this through the School Learning Action Cell (SLAC) Program. Additionally, they can collaborate with additional institutions and invite experts to speak about research as part of their SLAC program. Additionally, the school administrator can obtain reference materials such as journals, research books, and other materials necessary for conducting research in order to assist teachers who wish to conduct research in their classrooms. Lastly, another important suggestion made by respondents is to collaborate with other organizations that can help expand participants' knowledge and skills in conducting research, such as researchers from Masbate Province's higher education institutions. This is precisely what other schools are doing to entice teachers to pursue research careers. Frequently, the collaborating organizations discover common interests in research challenges and collaborate on a particular research project. This also aids in the formation of harmonious alliances with other institutions that share the same vision and objectives.

## Conclusion

In this time of pandemic, many educators should have been involved in conducting research if the majority of teachers are capable of pursuing a research endeavor to solve problems that arise in their respective workplaces. According to the findings of this study, public secondary school teachers in the Province of Masbate are only "slightly capable" of conducting research. As a result, it is critical for teachers to participate in research capability development programs. Additionally, the majority of respondents lacked scientific training and struggled with time management, resulting in a very low percentage of research productivity. Their primary obstacle in conducting research is a lack of scientific training, followed by poor time management. Additionally, the data indicated that the majority of teachers do not face conflict with colleagues and are not motivated to pursue additional education due to a lack of incentives. Respondents suggest that the best intervention for

conducting research is to participate in research training, engage in school-based mentoring, and encourage collaboration with experts. Additionally, prudent resource management was suggested. Time, money, methods, and materials are just some of the resources that must be managed prudently in order to devote some time and effort to research.

In light of this, the researchers would like to recommend that officials from the Department of Education, particularly those in the Division of Masbate Province, to conduct a research capability enhancement program to strengthen teachers' capability to conduct research, particularly on the following indicators for which respondents are slightly capable. Additionally, teachers in public secondary schools may receive training in scientific research and time management. Additionally, the Division of Masbate Province may strengthen school-level mentoring and foster collaborations with institutions that excel in research within the Province of Masbate. Additionally, they may consider requiring the acquisition, creation, and distribution of updated research guides to teachers in order to equip them with the necessary knowledge, skills, and values that will contribute to high research productivity and effective teaching of research subjects to students.

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