Status, Challenges and Directions of Research Involvement of Teachers: A Baseline Study for Research and Development Intervention Program in Dinagat Division

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Abstract— *DepEd through DepEd Order No. 65, s. 2003mandates the institutionalization of the research-based decision and policy making in the department. Nevertheless, in remote areas like Dinagat Islands, only few teachers, both in public and private schools, were involved in research. As baseline study for the research and development intervention program of Dinagat Division, this study aimed to find out the status, challenges and directions of research involvement of private and public school teachers in the Division of Dinagat Islands. Specifically, the study sought data on the profile of the private and public school teachers in terms of age, sex, educational attainment, length of service, and research output; the issues and challenges encountered in conducting research by private and public school teachers in the schools division of Dinagat Islands in terms of knowledge about research, financial aspect, time allotment, other motivational factors such as self-advancement, family support, and proximity/distance/accessibility; the directions of the school that would help improve research involvement of private and public school teachers as to plan of action, and technical assistance; and the significant effect of the profile of the teachers to the challenges they encountered in conducting research. The study also design a classification model discriminating the research status of the teachers as to be able to complete or not. The results of this study served as basis for a research program that would address the issues and challenges of research involvement of private and public school teachers of Dinagat Islands.*

The explanatory sequential design was employed and only 51 were considered as respondents of the study. The instruments used were researcher made questionnaire and a semi structured interview for teachers and school heads to suit the assessment needs of the paper. Gathered data were treated using Frequency Count and Mean, Univariate ANOVA and Discriminant Analysis. In the qualitative analysis, the researcher transcribed, coded, and analyzed the interview part for common themes.

The findings revealed that both private and public school teachers encountered challenges in conducting research such as knowledge on research and financial support. In terms of school direction, motivating and mentoring/coaching are the technical assistance given to them. On the other hand, skills development, research partnerships, and rewarding are planned strategy of the school to improve the research involvement of private and public school teachers. The teachers in the public schools encountered greater challenges on time allotment in conducting research, compared to the teachers in the private schools. The teachers' educational attainment is accounted for the expected variation of challenges they encountered on time allotment and the motivating factor family support. The knowledge and

mastery of the technicalities in conducting research plays the most important contribution on discriminating the status of research of the schools in Dinagat Islands whether redssearch can be completed or not. The classification model of the status of research of the teachers based on the challenges they met in conducting researches with 76.5% accuracy is given by the function

Status score = -0.851 Knowledge + 0.382 Financial Aspect + 0.154 Time Allotment + 0.095 Self-advancement + 0.019 Family support + 0.208 Proximity/Distance/Accessibility, where the status is classified as not completed when score is below -0.104 and identified to be able to complete when the score is above it.

Keywords— *Research status, research challenges, research direction, Dinagat Division, research status classification model, baseline study for research and development intervention*

I. INTRODUCTION

Research is a very important tool in national and global progress. Its value cannot be underestimated for it is directed towards the preservation and improvement of quality of life. Moreover, the purpose of research is to serve man and the goal of research is for good life. Hence, due to research, man becomes progressive because of utilizing the products of research. Research serves as a solution to societal problems that are apparent from community level up to different government and non-government agencies. Thus, most government and nongovernment agencies are developing research agenda in order to find solutions to prevailing problems observed in the society.

To address this need the government through Republic Act no. 9155 or (Governance of Basic Education Act of 2001) mandates DepEd through DepEd Order No. 65, s. 2003 which institutionalizes the research-based decision and policy making in the department. This order stipulates that policies in the department should be based on research [1]. In addition, the Department of Education adopts the enclosed Basic Education Research Agenda through DepEd Order no. 39, s.2016 which provides guidance to DepEd and its stakeholders in the conduct of education research. This means that all teaching and non-teaching personnel in the Department are enjoined to fully implement research in terms of doing priority improvement projects for future referrals and modifications [2].

So, doing research has become one of the important professional development programs for teachers that are emphasized by the Department of Education (DepEd) and the Commission on Higher Education (CHED) [3]. Teachers both from private and public educational institutions are encouraged to conduct research in order to identify and address the teaching and learning issues and concerns in their classrooms and in the school. Thus, doing research has now become a part of every teacher's teaching evaluation and performance appraisal at the end of the school year. Moreover, DepEd ordered its schools heads and administrators across the country to adopt the "enclosed Basic Education Research Agenda" which promotes the conduct of research in schools by teachers [2]. The purpose is to discover schools' issues and solutions and form a part of teachers' professional development and skills enhancement. By doing research, teachers are believed to improve their teaching practices for the betterment of students' learning and for the school. However, conducting research in the country, especially in the public secondary schools, may be limited since only a few teachers have tried to do it [3].

The above mentioned study is similar as observed by the researcher in school level in remote area like Dinagat Island. Specifically, in New Mabuhay Elementary School, only 3 out of 9 teachers or 33% are involved into research. In addition, some teachers don't even know the Basic Education Research Agenda, and some teachers are not familiar with the guidelines in conducting research. Thus, how can these teachers help address the problems encountered in their classroom and have their professional development? This situation should not be neglected and should be given attention.

This situation prompted the researchers to conduct this study because they wanted to know the status, challenges, and directions of research involvement of private and public school teachers in Dinagat Islands. More specifically, the study aims the following: (1) to know the profile of the private and public school teachers-researchers in terms of age, sex, highest educational attainment, length of service and research output; (2) todetermine at what extent the issues and challenges encountered in conducting research by private and public school teachers in the schools' division of Dinagat Islands in terms of knowledge about research, financial aspect, time allotment and other motivational factors such as self-advancement, family support and proximity/distance/accessibility; (3) to compare the issues and challenges the teachers' encountered in conducting research by age, sex, highest educational attainment and length of service; (4) to model the classification of researchstatus as to completed or not completed using the challenges in conducting research; and (5) to recognize the directions of the school that would help improve research involvement of private and public school teachers as to plan of action and technical assistance. The researcher believes that this research will help the schools in designing activities that could address the low turnout of research.

II. CONCEPTUAL FRAMEWORK

This study is anchored on DepEd Order no. 39, s. 2016 [2] or the Adoption of Basic Education Reseacrh Agenda (BERA) which states that:

1.　　The Department of Education adopts the enclosed research agenda which provides guidance to DepEd and its stakeholders in the conduct of education research and in the utilization of research results to inform the Department's planning, policy, and program development aligned with its vision, mission, and core values.

2.　　The research agenda shall builds on gains from existing research, generate new knowledge on priority research areas, focus DepEd's relevant education issues, and maximize available resources for research within and outside the Department.

This order stipulates that policies in the department should be based on research. The present study is related to this concept because the researcher wanted to know the status, challenges and directions of research involvement of private and public school teachers of Dinagat Islands, then, from the findings of the study, the researcher will propose a research capability buiding program that would improve the research status of these teachers.

In the framework of the study, the variables considered include the profile of the teachers in terms of Age, Sex, Educational attainment, Length of service, and research output as to completed or not since these factors will tell us the status of research involvement of private and public school teachers of Dinagat Islands. The issues and challenges encountered by Private and Public School Teachers in conducting research in terms of: Knowledge, Financial Aspect, Time Allotment and Other Motivational Factors such as Self-advancement, Family

support, and Proximity/distance/accessibility were also taken into account. The profile of the participants may affect the issues and challenges the teachers encountered in conducting research. On the other hand, another box that contains the direction of the school in terms of technical assistance and plan of action that would help improves research involvement of private and public school teachers. Lastly, the direction of the schools in improving teachers' involvement in research were studied. This study will serve then as baseline for proposing research capability building program for private and public school teachers in DepED Division of Dinagat Islands.

Challenges refers to the issues and concerns the teachers experienced pertaining to the conduct of research. Direction refers to the plan initiated by the school administrators to improve the status of research of the private and public school teachers in Dinagat Islands. Knowledge is the teachers understanding on the basic component of research. Financial aspect refers to the amount of money spent in research engagement. Time allotment means the measurable period spent by teacher in research. Proximity/Distance/Accessiblity is being easy to communicate or deal with. Self-advancement refers to the professional development of the teacher benefited through research engagement. Family support means the support given to researcher-teacher morally, spiritually, and physically. Plan of action is the strategy given by the school and other partners/alliances to private and public school teachers to improve research involvement. Research Output refers to the study conducted by teachers either completed or not. Status refers to the research output.

Thus, in this study, emphasizes the relevance of the collaboration of the school, and teachers in research as required by Department of Education through DepEd Order no. 39, s. 2016 or the Adoption of Basic Education Research Agenda for Education development and improvement [2].

III. METHODOLOGY

This section explains how this baseline study was carried out as in the following general structure.

A. Research Design

The researcher employed the explanatory sequential design in this study. According to Creswell in [4] explanatory design is a mixed method design in which the researcher begins by conducting a quantitative phase and follows up on specific results with a second phase. The second, qualitative phase is implemented for the purpose of explaining the initial results in more depth. The design is deemed appropriate because it seeks to find out the status, challenges, and direction of research involvement of private and public school teachers in the Division of Dinagat Islands. Creswell's explanatory sequential method is shown in Figure 2.
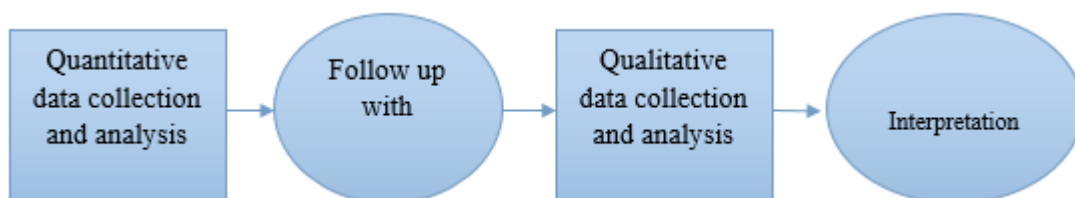

Fig. 1 Creswell's Explanatory Sequential Mixed Method

B. Participants

This study was conducted in the Division of Dinagat Islands because this is the workplace of the researcher. Since the notion of this study concerns research challenges of teachers, the

target population would be those public and private schools teachers who engaged into research either completed or ongoing, published or presented and funded by DepEd or any other agencies. There were only 14 schools whose teachers in Dinagat Division who were able to produced research outputs which include 5 public elementary schools, 7 public secondary schools and 2 private secondary schools. Furthermore, in these 14 schools there were only 51 teachers who were involved in making researches and hence the sampling population considered is 51. For the reason that there were only a small number of teachers who engaged in research, the sampling population were considered in this study. Hence no sampling procedures were taken. Table 1 presents the distribution of the participants as explained.

   The School heads of the 14 selected schools were also considered as one of the participants because in getting the data about the direction of the school in improving research involvement of private and public school teachers the researcher have an interview to the selected school heads in Dinagat Islands Division.

TABLE I

DISTRIBUTION OF THE PATICIPANTS

Public				Private			
Name of School	Teachers' Population	Sampling	**%**	**Name of School**	Teachers' Population	Sampling	**%**
Elementary				*Secondary*			
Albor Central Elementary School	25	6	**24%**	Don Jose Ecleo Memorial Foundation College of Science and Technology	16	10	**63%**
Dinagat Central Elementary	17	3	**18%**	Loreto Academy	10	5	**50%**
Doña Helene Elementary School	12	2	**17%**				
New Mabuhay Elementary School	9	3	**33%**				
Tagbuyakhao Elementary School	4	3	**75%**				
Secondary							
Albor National High School	37	3	**8%**				
Dinagat School of Fisheries	33	1	**3%**				
Don Ruben E.Ecleo Sr. Menorial National High School	82	5	**6%**				
Loreto National High School	24	1	**4%**				
Oston National High School	12	3	**25%**				
Ruben E. Ecleo Sr.National High School	24	3	**13%**				
Tag-abaca National High School	28	3	**11%**				
Total	307	36	**12%**		26	15	**56%**

C. Research Instrument

   The instrument that was used in this study was an adapted but modified survey questionnaire divided into two parts. First part is a checklist about the profile of the teachers. The second part of the survey consists of five Likert scale items. In Part II-A questionnaire, the teachers will rate the difficulty they have experienced with components of the research

process based on DepEd Order no. 16, s.2017 in [5] or Research Management Guidelines which includes: a) rationale of the research, b) writing the literature review and proper citations, c) formulating research questions, d) stating the scope and limitation, e.) developing and writing the methodology as to sampling and data collection, f.) discussion of results and recommendations, g.) dissemination and advocacy plans, and h.) preparing financial report. The rating scale for section one is a five-point Likert scale. The numeral five indicates "extreme level of difficulty," a four indicates "high level of difficulty," a three indicates "moderate level of difficulty," a two indicates "low level of difficulty," and a one indicates "no difficulty."

The next part consists of five statements regarding teachers' issues and concerns in research. Respondents will rank their agreement with each statement. Similar to part one, a five-point Likert scale is adapted in this part. Circling a numeral five denotes that the respondent strongly agrees with the statement. Choosing a numeral four means a respondent agrees, three means the respondent moderately agrees the statement, two means disagree and marking a one signifies that the respondent strongly disagrees with the statement.

In the qualitative part of the study, an interview using the interview guide questions was conducted to the teacher participants to follow up and support quantitative data. Another set of interview was conducted to the selected school heads of Dinagat Islands division in finding the direction of the school to improve the research involvement of public and private school teachers. The interview guide questions for teachers was used to validate the issues and challenges the teachers experienced in conducting their research, while the interview for school heads was to address the direction that was given to the teachers and how they were given support from their

D. Data Gathering Procedure

In the quantitative phase, the researcher asked permission to conduct study from the division office, Division of Dinagat Islands, and then upon approval the researcher asked letter of endorsement from the Schools Division Superintendent for allowing to administer the questionnaires to the teacher-participants. Next the researcher secured in the Division Office for the list of schools who have research output for the past three years, since Basic Education Research Agenda had just started year 2016 [2].

After having the list of schools, the researcher will give the letter of permit to the head of each participating schools, and upon approval she will personally distribute the questionnaires and will retrieve it from the participants after answering it.

In the qualitative phase, the researcher personally asked permission from the school head their approval to be part of the study as an interviewee in an interview. Then the researcher also asked permission to get back to teacher-participants who will be interviewed one-on-one to help explain and to support the quantitative data gathered in the first phase.

E. Data Analysis

For the quantitative data analysis, the following statistical tools were used.

1. Frequency – used to present the summary statistics of the profile of the respondents.

2. Mean- used to measure the extent of challenges the teachers encountered in conducting research.

3. Univariate Analysis of Variance - used to determine significant effect of the respondents profile like type of school, age, sex, highest educational attainment and length of service to the challenges encountered in conducting research.

4. Discriminant Analysis – used to establish a classification model on the status of research of the teachers as in predicting whether the research will be completed or not based on the challenges encountered by the teachers in conducting research.

In the qualitative data analysis, the researcher transcribed, code, and analysed the interview part for common themes and patterns.

F. Ethical Dimensions of the Study

Research always involves dealing with people, organizations and groups. Dealing with people raises ethical issues, so researchers must be considerate and part of being considerate is being careful about the manner in which researchers seek permission from those they wish to study. Reference [4] maintains that "the researchers need to protect their research participants; develop a trust with them; promote the integrity of research; guard against misconduct and impropriety that might reflect on their organizations or institutions; and cope with new, challenging problems". This is all about how the researcher behaves before and during fieldwork.

G. Establishing Rigor and Trustworthiness

Since there is qualitative data in this study which do not use instruments with established metrics about validity and reliability, it is pertinent to address how qualitative data will be established that the research study's findings will be credible, transferable, confirmable, and dependable. Trustworthiness is all about establishing these four things [6].

IV. RESULTS AND DISCUSSION

This section presents the result of the study and provides in- depth analysis and interpretation of data. The

presentation and discussion of data follow the sequence of the research questions.

TABLE 2
PROFILE OF THE PATICIPANTS

Profile Variables		Public (n=36)		Private (n=15)]		Total (n=51)	
		f	%	f	%	f	%
Age	20-25 years old	1	3	9	60	11	22
	26-30 years old	7	19	2	13	9	18
	31-35 years old	7	19	2	13	9	18
	36-40 years old	8	22	1	7	9	18
	41-45 years old	1	3	0	0	1	2
	46-50 years old	5	14	0	0	5	10
	50 years old and above	7	19	0	0	7	14
Sex	Male	9	25	3	20	12	24
	Female	27	75	11	73	39	76
Educational Attainment	Bachelor's Degree	7	19	13	87	20	39
	With Masteral units	18	50	1	7	19	37
	Master's Degree	6	17	0	0	6	12
	With PhD/EdD/DBM units	3	8	1	7	4	8
	Doctoral Degree	2	6	0	0	2	4
Length of Service	0-5 years	8	22	12	80	21	41
	6-10 years	7	19	2	13	9	18
	11-15 years	8	22	0	0	8	16
	16-20 years	3	8	0	0	3	6
	21 years and above	10	28	0	0	10	20
Reseach Outputs	Completed	23	64	10	67	33	65
	Ongoing/not completed	14	39	4	27	19	37

Table 2 presents the teacher participants profile in terms of age, sex, educational attainment, length of service

and research outputs categorized by the type of school they attended. Out of 51 teachers, 15 (29%) were from private school and, 36 (71%) were from public school. This implies that majority of the teachers conducted research were from public schools.

As presented in the table, most of the respondents of aged 20-25 years old were from private schools. In fact,

out of the 11 (22%) respondents , 10 (67%) were from private and 1(3%) from public school With respect to age range 26-30 years old, most of the respondents were from public schools. Out of 9 (18%) respondents in this age bracket, 7 (19%) were from the public schools while 2 (13%) from the public schools. The same is true with the respondents of age 31-35 years old. As to age 36-40 years old, there were 9 (18%) respondents belong to this age and 8 (22%) of them were from public schools. It can also be seen in the table that those respondents of age 41 years old and above were 1 (2%) from public schools only, none from private. Furthermore, most of the respondents from the private schools of age 20-25 years old while from public schools most of them were of age 36-40 years old.

Noticeably, both in public and private schools, majority of the respondents were female. In public schools, out

of 36 respondents, 27 or 75% were female and 9 or 25% were male. In private schools, out of 15 respondents, 12 or 80% were female and 3 or 20% are male. As a whole, 39 or (76%) respondents were female and 12 or (24%) were male.

It can be viewed from the summary that there were 20 or 39% respondents who completed bachelor's degree

in which 13 or 87% of them were teachers in private schools and 7 0or 19% in public schools. Out of 19 or 37% respondents who have masteral units, 18 or 50% of them were public school teachers and only 1or 7% private school teacher. The 6 or 12% respondents with master's degree were all public school teachers. 3 of 4 respondents with PhD/EdD/DBM units were teachers in public school and 1 from private or a total of 4 or 8% have PhD/EdD/DBM units. The 2 or 4% doctoral degree holder respondents were teaching in public school. It can be seen clearly from the summary that most of the respondents or 13(or 87%) in private schools involved into research were bachelor's degree holder. Majority of the public school teachers who engaged in research have obtained masteral units.

Table 2 also revealed that out of 21or 41% respondents teaching for 0-5 years, 13 or 87% were in private

schools and 8 or 22% in public schools. The 9 or 18% respondents who have been teaching for 6-10 years were composed of 2 or 13% teachers from the private schools and 7 or 19% from the public schools. Those who have been teaching for 11 years and above were all from the public schools. It can be inferred then that most of the teachers engaged in research were new in the teaching field. Moreover, majority of the researchers in private schools were new in teaching while the researchers in public schools were commonly have 21 years of teaching experience. It can be viewed from the results that out of 33 completed research outputs, 23 were produced by public school teachers and 10 from private school teachers. There were also 19 ongoing researches where 14 produced by the respondents in public school and 4 from private.

Table 4 presents the three -year comparative count as to number of teacher-researchers per school.

TABLE 3
THREE YEAR COMPARATIVE NUMBER OF RESEARCHERS
FROM PRIVATE AND PUBLIC SCHOOLS

| School Type | Name of School | No. of Teachers | No. of Researchers | | | | | |
			School Year 2016-2017	%	School Year 2017-2018	%	School Year 2018-2019	%
Public Schools	Albor Central Elementary School	25	3	12	3	100	0	-100
	Dinagat Central Elementary	17	0	0	3	18	0	-100
	Doña Helene Elementary School	12	0	0	2	17	0	-100
	New Mabuhay Elementary School	9	3	33	0	-100	0	0
	Tagbuyakhao Elementary School	4	0	0	3	75	0	-100
	Albor National High School	37	0	0	3	8	0	-100
	Dinagat School of Fisheries	33	0	0	0		1	3
	Don Ruben E.Ecleo Sr. Menorial National High School	82	0	0	2	2	3	23
	Loreto National High School	24	0	0	0	0	1	4
	Oston National High School	12	3	25	0	-100	0	0
	Ruben E. Ecleo Sr.National High School	24	0	0	3	13	0	-100
	Tag-abaca National High School	28	0	0	3	11	0	-100
	Sub-Total	307	9	3	22	144	5	-77
Private Schools	Don Jose Ecleo Memorial Foundation College of Science and Technology	16	3	19	3	0	4	33
	Loreto Academy	10	1	10	3	200	1	-67
	Sub-Total	26	4	15	6	50	5	-17
	Grandtotal	333	13	4	28	115	10	-64

   For School Year 2016-2017, 9 or 3% researchers were from public schools, and 4 or 28% researchers from private schools. Meanwhile, 22 or 144% increase on the number of researchers from School Year 2016-2017 to 2017-2018 from public schools, while 6 or 50% increase on teachers who conducted research from private schools. On the other hand school year 2017-2018 to 2018-2019 the number of teacher-researchers decreases both from private and public schools, in fact 77% decrease on the number of researchers from public schools while 17% decrease from private schools. It can be viewed from the table that from 2016-2017, 13 or 4% teachers conducted research, while from school year 2016-2017 to 2017-2018, 28 or 115% increase on the number of researchers. On the other hand, from school year 2017-2018 to 2018-2019, 10 or 64% decrease on the number of teacher-researchers. It is implied that the on the first two years of implementation of research in the Division of Dinagat Islands more teachers were motivated to conduct research. While, after two years of implementation, there is a decrease on the number of teachers who conducted research. Thus, the DepEd did not there is a need to retool and give technical assistance to teachers to become more motivated to do research apart from the rewards which are to be extended to teachers who are conducting research.

   In investigating the issues and challenges encountered in conducting research by private and public school teachers in the schools division of Dinagat Islands, the respondents, assessment were summarized in the following Table 3.

TABLE 4
ISSUES AND CHALLENGES THE TEACHERS ENCOUNTERED
IN CONDUCTING RESEARCH

Issues and Challenges	Public			Private			Overall		
	M	S	Q	M	S	Q	M	S	Q
A. Knowledge about Research									
1. Writing the rationale of the research	2.	0.	M	2.	0.	M	2.7	0.	M
2. Writing the literature review and proper citations	3.	0.	M	2.	1.	M	2.9	0.	M
3. Formulation the research questions	3.	1.	M	2.	0.	M	3.1	1.	M
4. Stating the scope and limitation of the study	2.	0.	M	2.	0.	M	2.7	0.	M
5. Developing and writing the methodology as to sampling and	3.	0.	M	3.	0.	M	3.1	0.	M
6. Discussion of results and recommendations	3.	0.	M	2.	1.	M	3.1	1.	M
7. Dissemination and Advocacy Plan	3.	0.	M	2.	0.	M	3.0	0.	M
8. Preparing Financial Report	2.	0.	M	3	1.	M	2.9	0.	M
Average	3.	0.	M	2.	0.	M	2.9	0.	M
B. Financial Support									
1. Research can be done at minimum expense	2.	1.	M	3.	1.	M	2.7	1.	M
2. Research is expensive	2.	0.	A	2.	1.	A	2.4	0.	A
3. Money is not an issue in conducting research	3.	0.	M	3.	1.	M	3.3	1.	M
4. Research is not an expensive pursuit	3.	1.	D	3.	0.	D	3.3	1.	M
5. The school/funding association has allocated enough	3.	1.	M	3.	0.	M	3.1	1.	M
6. The school provides budget for materials	2.	0.	M	3.	0.	M	3	0.	M
7. Monetary benefits are given to teachers who conduct	2.	1.	M	2.	1.	M	2.8	1.	M
Average	2.	0.	M	3.	0.	M	2.9	0.	M
C. Time Allotment									
1. Research is time consuming.	2.	1.	A	1.	0.	SA	2.1	1.	A
2. Teaching load is not affected by the time spent in	3.	1.	M	3.	0.	M	3.1	1.	M
3. Research requires less time.	3.	0.	D	3.	0.	D	3.8	0.	D
4. Reduction of teaching load or granting of leave credits is	3.	1.	M	2.	1.	M	3.0	1.	M
Average	3.	0.	M	2.	0.	M	3.0	0.	M
D. Other Motivational Factors									
Self-advancement									
1. Research boasts credibility	1.	0.	SA	1.	0.	SA	1.7	0.	SA
2. Research builds trustworthiness or reliability	1.	0.	A	1.	0.	A	1.9	0.	A
3. Research advances professional status.	1.	0.	A	2.	0.	A	1.9	0.	A
4. Research gives monetary incentives.	3.	1.	M	2.	0.	A	3.0	1.	M
5. Research widens linkages with other researchers.	2.	1.	A	1.	0.	A	1.9	0.	A
Average	2.	0.	LC	2.	0.	LC	2.1	0.	LC
Family Support									
1. Family provides financial support for the conduct of	2.	1.	M	1.	0.	SA	2.4	1.	A
2. Members of the family provide moral support to the	2.	1.	A	1.	0.	SA	1.9	1.	A
Average	2.	1.	LC	1.	0.	NC	2.1	1.	LC
Proximity/Distance/Accessibility									
1. Wifi connection is available at school.	2.	1.	A	2.	1.	A	2.7	1.	A
2. The school have available computers for encoding of data.	2.	0.	A	2.	1.	A	2.1	0.	A
3. The school administrator allows the researcher to gather	2.	1.	A	2.	0.	A	2.1	1.	A
Average	2.	0.	LC	2.	0.	LC	2.3	0.	LC

Legend: Scale   Qualitative Description (QD)
*   1-1.8   No Difficulty (ND)   Strongly   Agree(SA)   ~   No*
*   1.81-2.6   Low Level Difficulty (LLD)   Agree (A) ~ Less Chalenging (LC)*
*   2.61-3.4   Moderate   Level   Difficulty   Moderately   Agree   (MA)   ~*
*   3.41-4.2   High Level Difficulty (HLD)   Disagree (D) ~ Highly Challenging*
*   4.21-5   Extreme Level Difficulty (ELD)   Strongly   Disagree   (SD)   ~*

As assessed by the respondents both in the public and private schools, they perceived the knowledge about research as moderately difficult (reflected by the overall mean of 3.06). More specifically, respondents perceived that they have moderate level of difficulty in writing rationale, literature review and proper citations in research. In addition, they found moderately difficult on how to formulate research questions, state scope and limitations of the study and write methodology such as sampling and collection of data. In discussing

results and writing recommendation was also perceived as moderately difficult by the respondents. Moreover, dissemination of advocacy plan and preparing financial support have been perceived as moderately difficult for the teachers both in public and private schools. On the other hand, public school teachers have the highest mean difficulty in formulating research questions while the private schools teachers in developing and writing methodology. These were implied in their responses:

> *I find difficulty in the interpretation of the data gathered because there is no proper training on it. I am glad that one of the proponent offered help for free in doing the interpretation of the result.* (I-D)
> *...and little knowledge about research.* (I-C)
> *Then, on how to gather valid and accurate data and information. I find difficulty in gathering data and information from previous researches.* (I-E)

As supported by de Borja in [7], writing the Framework of the Study is the most difficult part.

Evidently, both public and private school teacher-respondents agreed that research is expensive. On the other hand, they moderately agreed that in can be done at a minimum expense and money is not an issue in conducting research. They also agreed moderately that school/ funding association has allocated enough budget for research and provides budget for materials. In the same way, they moderately agreed that monetary benefits were given to teachers who conduct research. Generally, the average means showed that respondents perceived moderate challenges in seeking financial support in pursuing research .It is evident from the fact that DepEd funded many researches from the teachers It is understood then that the teacher-researchers, whether in public or private schools, spent high cost in conducting research specially for those of personal expense. When funded by agencies like DepED or the school definitely money wouldn't be an issue. These were implied in their responses:

> *If the school provides financial assistance to teachers, encourage teachers to participate through giving of rewards and incentives to them, more teachers will conduct research project.* (I-D)
> *The worst experience I have encounter in my research journey was the financial support to the entire work of my research. to the point that I have borrowed money for my co-teacher just to continue my research project.* (I-D)

Thus, research partnerships vary considerably in scale and scope, but at the heart, share the common goal of building the knowledge base to support the work of educators [8]. This means that research partnerships is important in order to seek support from other alliance members' technical assistance and financial assistance in doing research.

Both the public and private school teacher-respondents perceived moderate challenge regarding the time allotment in conducting research. More specifically, in public schools, they agreed that research is time consuming and in private schools, respondents have strong agreement on this. Consistently, they disagree that it requires less time. On the other hand, they moderately agreed that their teaching load was not affected by their time in conducting research and deloading and leave credits were provided to the researchers. It is believed from the findings that respondents allocate more time in conducting research but they assured that their research engagement did not disturbed their classes and school obligations. This was implied in their answers to the interview.

In my opinion some teachers think that research is very difficult to conduct and it is a waste of time and money. (I-B)

The challenges that we have experienced while having our study are poor internet signal, financial problem, research is time consuming, and little knowledge about research. (I-C)

When my co teachers know that I have already started conducting my research, what I have heard were just negative reactions, like, research is time consuming and difficult to do. (I-D)

It is supported by the study in [9]. It is also identified that time as the leading factor hindering teachers to conduct action research. This result confirms the finding that time is the reason why development of research culture among teachers is low. This is because teachers use most of their time in teaching, preparing of lessons, checking papers, recording and computing grades. He further stressed that if there is a little time left, it is used for personal needs. Thus, it takes commitment from the teachers to spare some of their time for research.

It can be gleaned from the results of the average means that both public and private school teachers perceived agreement concerning the challenges they met in conducting research in terms of self-advancement. In particular, respondents have strongly agreed that having research boost their credibility. They also agreed yet of less belief that research builds trustworthy or reliability, advances professional status and widens linkages with other researchers. Meanwhile, respondents in public schools only moderately agreed that research gives monetary incentives while in private schools, respondents agreed on it. This I believed that monetary incentives in research is more apparent in private than in public. As a whole, respondents both in public and private schools perceived that in conducting research, self-advancement they encountered less challenges. Alternatively, self-advancement were embraced by the researchers.

As to family support, findings revealed that respondents in public schools moderately agreed that their family supported them in the conduct of their researches. Moreover, they also perceived agreement that their family morally supported the researchers. The respondents in private schools strongly agreed that their family supported them as researchers, not just financially but also morally. Generally, both public and private school teachers perceived to have been encountered less challenges in terms of family support.

Furthermore, both the public and private school teachers perceived agreement that wifi connection and computers for data encoding were available in their schools. Likewise, they agreed allows the researcher to gather LIS & EBEIS data either offline or online. Hence in general, it is believed that respondents, both in private and public schools, encountered less challenges in terms of proximity/distance and accessibility in conducting studies.

The effect of the profile of the teachers to their perceived challenges they encountered in conducting research is another interest in this study. Univariate ANOVA was conducted and findings were revealed in Table 5.

TABLE 5
SIGNIFICANT EFFECT OF TEACHERS' PROFILE TO THEIR CHALLENGES
IN CONDUCTING RESEARCH

Source	Dependent Variable	F	Effect Size	p	Decision
School type (df = 1)	Knowledge	0.006	0	0.938	Accept Ho
	Financial aspect	0.01	0	0.919	Accept Ho
	Time Allotment	5.733	0.144	0.022	Reject Ho
	Self-advancement	0.062	0.002	0.805	Accept Ho
	Family support	2.06	0.057	0.16	Accept Ho
	Proximity/Distance/Accessibility	0.803	0.023	0.376	Accept Ho
Age (df=6)	Knowledge	0.701	0.11	0.65	Accept Ho
	Financial aspect	1.932	0.254	0.104	Accept Ho
	Time Allotment	0.725	0.113	0.633	Accept Ho
	Self-advancement	0.441	0.072	0.846	Accept Ho
	Family support	0.818	0.126	0.564	Accept Ho
	Proximity/Distance/Accessibility	1.791	0.24	0.131	Accept Ho
Sex (df=1)	Knowledge	0.293	0.009	0.592	Accept Ho
	Financial aspect	0.004	0	0.95	Accept Ho
	Time Allotment	0.779	0.022	0.384	Accept Ho
	Self-advancement	0.007	0	0.935	Accept Ho
	Family support	0.153	0.004	0.698	Accept Ho
	Proximity/Distance/Accessibility	1.73	0.048	0.197	Accept Ho
Highest Educational Attainment (df=4)	Knowledge	1.215	0.125	0.322	Accept Ho
	Financial aspect	0.202	0.023	0.936	Accept Ho
	Time Allotment	4.564	0.349	0.005	Reject Ho
	Self-advancement	1.164	0.12	0.344	Accept Ho
	Family support	3.454	0.289	0.018	Reject Ho
	Proximity/Distance/Accessibility	1.726	0.169	0.167	Accept Ho
Length of Service (df=4)	Knowledge	1.642	0.162	0.186	Accept Ho
	Financial aspect	0.282	0.032	0.888	Accept Ho
	Time Allotment	3.093	0.267	0.028	Reject Ho
	Self-advancement	0.094	0.011	0.984	Accept Ho
	Family support	1.242	0.127	0.312	Accept Ho
	Proximity/Distance/Accessibility	1.104	0.115	0.371	Accept Ho

As observed from the results, when grouped by age, sex and length of service the probability values obtained across all factors in challenges are greater than 0.05 level of significance. These imply that there was no significant difference in the challenges met by the teachers in conducting research as to knowledge, financial aspect, time allotment, self-advancement, family support and proximity/distance/accessibility with respect to the teachers' age. In the same way, male and female teachers do not significantly vary in their challenges in conducting research in terms of knowledge, financial aspect, time allotment, self-advancement, family support and proximity/distance/accessibility. Likewise, regardless of how long the participants were into teaching, they experienced most likely similar

challenges in conducting research. Accordingly, the teachers' age, sex and length of service did not affect the issues and challenges they met in conducting research.

When the participants were grouped according to the type of school they were employed, it was found out that they did not significantly differ in their challenges in conducting research in terms of knowledge, financial aspect, self-advancement, family support and proximity/distance/accessibility as evident by the computed p-values which are greater than 0.05 level. On the contrary, there was significant difference obtained in the challenges met by the participants in conducting research in terms of time allotment when they were clustered by school type (F(df=1)=5.733 at p = 0.022). This implies that the type of school the teachers' employed affects the challenges they met as to time allotment in conducting research. The effect size 0.144 signifies that 14% of the variation in the teachers' challenges in terms of time allotment was accounted for the type of school they've been employed.

When the participants were also grouped according to their highest educational attainment, the tabular values showed that there was no significant difference established in the participants' challenges in conducting research in terms of knowledge, financial aspect, self-advancement and proximity/distance/accessibility. However, there was significant difference established in the participants' challenges in conducting research in terms of time allotment (F(df=4)=4.564 at p = 0.005) and family support (F(df=4)=3.454 at p=0.018). Findings indicate that the highest educational attainment of the participants has effect to the challenges they met in terms of time allotment and family support in conducting research. In fact, the effect sizes 0.349 and 0.289 on time allotment and family support, respectively, showed that the difference in the teachers challenges in time allotment and family support in conducting research is 34.9% and 28.9% explained by the highest educational attainment.

Post-hoc comparison test was also performed to give emphasis as to which groups the significant difference in the challenges occur. Tables 6 and 7 displays the mean differences in challenges encountered in conducting research of groups by school type and highest educational attainment, respectively.

TABLE 6
POST-HOC TEST ON THE DIFFERENCE ON TIME ALLOTMENT CHALLENGES
BY SCHOOL TYPE

School type	Private	Public
Private (Mean=2.523)	1	0.032*
Public (Mean=3.191)	0.032*	1

Significant At p < 0.05 level.

TABLE 7

POST-HOC TEST ON THE DIFFERENCE ON TIME ALLOTMENT AND FAMILY SUPPORT CHALLENGES BY HIGHEST EDUCATIONAL ATTAINMENT

Challenges met	Highest Educational Attainment	Bachelor's Degree	With Masteral units	Master's Degree	With PhD/EdD/DBM units	Doctoral Degree
Time Allotment	Bachelor's Degree ($\bar{x}$ = 2.878)	1	0.956	0.042*	1	1
	With Masteral units($\bar{x}$ = 2.506)	0.956	1	0.012*	0.994	0.998
	Master's Degree ($\bar{x}$ = 3.556)	0.042*	0.012*	1	0.238	0.471
	With PhD/EdD/DBM units($\bar{x}$ = 2.714)	1	0.994	0.238	1	1
	Doctoral Degree($\bar{x}$ = 2.631)	1	0.998	0.471	1	1
Family Support	Bachelor's Degree($\bar{x}$ = 1.914)	1	0.319	0.001*	1	0.799
	With Masteral units($\bar{x}$ =2.146)	0.319	1	0.06	0.863	0.999
	Master's Degree($\bar{x}$ = 3.508)	0.001*	0.06	1	0.048*	0.676
	With PhD/EdD/DBM units($\bar{x}$ = 1.831)	1	0.863	0.048*	1	0.908
	Doctoral Degree($\bar{x}$ = 2.073)	0.799	0.999	0.676	0.908	1

Significant At p < 0.05 level.

Tabular values (see Table 6) showed that teachers in public schools (Mean=3.91) significantly encountered more challenges in conducting research in terms of time allotment than those in the private schools (Mean=2.523). It is believed then that the period of time spent in research by the teachers in public schools is tougher than for the teachers teaching in the private schools of Dinagat Islands. Meanwhile, the post-hoc comparison results in Table 7 showed the the participants who obtained bachelor's degree significantly differ in the challenges met as to time allotment in conducting research than those with master's degree. Those with master's units also significantly differ from those who have full-pledged master's degree. In addition, indicated by the mean assessment on the challenges met, the teachers who obtained master' degree have greater challenge encountered in terms of time allotment in conducting research than those with bachelor' degree only and those with master's units. As to family support, the difference lie between the teachers with bachelor's degree and master's degree as well as between the teachers with master's degree and those with PhD/EdD/DBM units. As depicted by the groups' mean assessment, those with master's degree encountered significantly greater challenges in conducting research in terms of family support than those with bachleor's degree and those who obtained Phd/EdD/DBM units.

Discriminant analysis was performed to model the classification of the status of research of the teachers based on the challenges they met in conducting researches. Discriminant analysis, one of the more advanced multivariate classification techniques, was used in discriminating between the identified clusters of teachers, by specifying the weight (discriminating power) to the variables on the challenges encountered in conducting research. A model has been finalized and one discriminant functions (DF) was found to discriminate the status of research of the teachers considered in this study. The DF coefficients and the classification of observations are presented in Table 8.

TABLE 8
DISCRIMINANT FUNCTIONS COEFFICIENTS AND CLASSIFICATION SUMMARY

	Variables	Function
Coefficients	Knowledge (X_1)	-0.851
	Financial aspect (X_2)	0.382
	Time Allotment (X_3)	0.154
	Self-advancement (X_4)	0.095
	Family support (X_5)	0.019
	Proximity/Distance/Accessibility(X_6)	0.208
Classification	Proportion Correct	76.50%
Group Centroids	Completed	0.248
	not completed	-0.456
Significance	Eigenvalue	1.18
	% of Variance	100%
	Wilk's Lambda	0.395
	Chi-square	5.123
	df	6
	p-value	0.05

The eigenvalues and Wilks' lambda computed signify that the discriminant function explains well the variation of the status of the teachers' researches. There are two groups considered here, completed researches and not completed. Thus, only one (1) function is applicable. The eigenvalue 1.18 (>1) indicates that 100% of the variance in challenges encountered in conducting research is explained by the function. Moreover, the Wilks' Lambda = 0.395(p-value = 0.00<0.05) which is relatively small showing that the obtained function of the challenge indicate good discriminatory ability in classifying status of research as to complete or not complete.

The coefficients indicate the relative importance of each parameter in predicting the vulnerability of the lake. Coefficients with large absolute values correspond to the challenges with greater discriminating ability on the status of research. It can be gleaned from Table 7 that the challenges encountered in terms of the knowledge in conducting research exhibited a strong contribution in discriminating the status of research of the teacher and account for most of the expected variation of the status. The relative contribution for classifying research status arranged in order as follows: Knowledge > Financial Aspect > Proximity/Distance/Accessibility > Time Allotment > Self-advancement > Family Support.

The classification summary shows how well the discriminant function works and if it works equally well for classifying status of research through the proportion of correct prediction. As shown from the results, the DF works 76.5% well for classifying completed or not completed researches. This implies that the model (the DF) is relatively good in discriminating research status of the schools in the Division of Dinagat Islands.

Centroids are the mean discriminant scores for each group. This is used to establish the cutting point for classifying cases on the status of research when the variable values were entered in the function. The reference point for discriminating status is the midpoint of -0.456 and .248 which is -0.104. This implies that the value of the function DF below -0.104 is an indication of being not complete and above it depicts complete.

The qualitative analysis on the direction of the schools in helping improve the research involvement of the teachers is presented below.

TABLE 9

DIRECTION OF THE SCHOOL THAT WOULD HELP IMPROVE RESEARCH INVOLVEMENT

OF PRIVATE AND PUBLIC SCHOOL TEACHERS AS TO PLAN OF ACTION

INFORMANT	SIGNIFICANT STATEMENTS	CONCEPTS
1	• Allow all teachers to attend research seminar so that all of them have the opportunity to make their own research. • Convince every teacher to craft their own for they will be benefited by the time they will apply for promotion	Allowing teachers to attend research related trainings Convincing teachers through words of encouragement
2	• I allow them to attend to the different trainings/seminars for continuous professional growth and development in all levels. • Giving them full support and understand their needs so that they could bear in their mind to make solutions for whatever problems underlying in our department	Allowing teachers to continue his professional growth through attending to trainings Understanding the needs of teachers in research
3	• I will allocate budget for research from school MOOE • I will advise my teachers to attend research related trainings and seminars. • I will give them enough time to work on their research through deloading of subjects so that they can give ample time in preparation of their research	Allotting an amount for research Advising teachers to attend trainings Deloading of subjects to teachers to work on their research

4	• I will encourage the teachers to attend trainings related to research • I will give financial support and encouragement to teachers who will conduct research	Encouraging teachers to attend trainings Giving financial assistance
5	• I would like to suggest to request an expert on action research to give us samples of different ways on constructing or writing action-research	Requesting an expert in research
6	• Arrange the class schedule handled by the teacher-researcher • Visit to school that have an award in terms of research • Research must be compulsory to every school to improve school performance, student progress and professional growth	Arranging the schedule of teacher researcher Visiting schools that have an achievement in research Imposing research to teachers that research is compulsory
7	• I allocate a little amount for research expenses coming from the school MOOE	Giving budget for research
8	• Encourage them to participate in research activity since it is already part of the requirement in the Department of Education (DepEd) by giving certificate of commendation to teachers who can produce research study.	Giving certificate of commendation to teachers
9	• I will encourage them to make research and inform them the importance of it especially in their promotion	Informing teachers the importance of conducting research especially in promotion

10	• I will encourage them to attend trainings/seminars about research to expose them on different process on research	Encouraging teachers to attend trainings
	• Send them to trainings on research and give substantial input that gives clear significance of research in educational field	Sending teachers to research trainings
11	• I will let my teachers attend to research related trainings	Sending teachers to trainings
	• I will allocate budget for research.	Allocating budget for research

The raw data were evaluated and concepts were analyzed as basis for the formulation themes.

TABLE 9

FORMULATED THEMES BASED ON THE RAW DATA

INFORMANT	CONCEPTS	THEMES
1, 2, 5, 10	Allowing teachers to attend research related trainings Sending teachers to trainings Encouraging teachers to attend trainings Encouraging teachers to attend trainings Allowing teachers to continue his professional growth through attending to trainings Understanding the needs of teachers in research Requesting an expert in research	Skills Development
3, 5, 6, 7, 11	Giving budget for research Giving financial assistance Allotting an amount/budget for research Visiting schools that have an achievement in research Requesting an expert in research	Research Partnerships
4, 8, 9	Giving certificate of commendation to teachers Informing teachers the importance of conducting research especially in promotion	Rewarding

A. Skills Development

According to Pati in [10] teachers' competency, motivation, and school organization culture influenced significantly their capability to undertake classroom action research. Teachers' training also significantly influenced the capability of teachers in doing research. By giving the teachers the support they need, teachers will not only appreciate it but also see the good and the advantages in doing research for their professional development; for themselves, and for their students [3].

B. Research Partnership

In research, resource allocation is needed to motivate the teachers to engage in research. Thus, school heads must allocate budget for research so that their teachers will be provided by the resources needed, such as human and financial resources. School heads must look for partners to support the research activity of their teachers. As one informant stated, I would like to suggest requesting an expert on action research to give us samples of different ways on constructing or writing action-research and to visit schools that have an achievement in research. This statement in connection with the latest research policy issued by the Department of Education through DepEd Order no.16, s.2017 [3] or the Research Management Guidelines is established in support to continue to promote and strengthen the culture of research in basic education. The enclosed policy also improves support mechanisms for research such as funding, partnerships, and, capacity building.

As supported by Coburn, C., Penuel, W., and Farell, C. [11] research partnerships are a promising strategy for improving schools and districts. But, it is often difficult for researchers and district administrators involved in partnerships to learn from one another. It can also be challenging for those interested in developing new partnerships to learn about different ways they might organize their work or anticipate and address the issues they may face. What is needed is a more robust dialogue in which district leaders, researchers, policymakers, and funders speak candidly about the strategic trade-offs partnerships face and the resources that are required for success. This means that research partnerships is important in order to seek support from other alliance members' technical assistance and financial assistance in doing research.

C. Rewarding

Reward as a form of incentive, whether monetary or non-monetary, given to teachers who have undertaken research is a good strategy to improve research involvement of teachers. As they stated, *I will encourage teachers to participate in research activity since it is already part of the requirement in the Department of Education (DepEd) by giving certificate of commendation to teachers who can produce research study*. Thus, appreciation is a fundamental human need. Teachers respond to appreciation expressed through recognition of their good work because it confirms their work is valued by their school head. When teachers are and their work are valued, their satisfaction and productivity rises, and they are motivated to maintain or improve their good work.

IV. CONCLUSIONS

In remote areas like Dinagat Islands, only few teachers, both in public and private schools, were involved in research despite the mandates of DepEd through DepEd Order No. 65, s. 2003 which institutionalizes the research-based decision and policy making in the department. This order stipulates that policies in the department should be based on research. Both private and public school teachers have encountered difficulty in the preparation of their

research in terms of the knowledge on technicalities in research making, financial aspect and time allotment. Some teachers have started to understand and conduct research. But they are not fully equipped with the knowledge and skills needed. The teachers in the public schools encountered greater challenges on time allotment in conducting research, compared to the teachers in the private schools. The challenges on time allotment and the motivating factor family support that encountered by the teachers in conducting research were affected by their educational attainment.

To help improve the research involvement of the teachers, the schools in Dinagat Division motivate teachers to conduct research and have mentoring and coaching to give support to their teachers who undertake research. The schools already have plans for the research skills development of their teachers. Research partnerships also could be one of the strategy to help the teachers in their financial and technical assistance that they need. Lastly giving rewards to teacher-researchers is also a strategy to motivate teachers to produce more researches.The knowledge and mastery of the technicalities in conducting research plays the most important contribution on discriminating the status of research of the schools in Dinagat Islands whether research can be completed or not. The classification model of the status of research of the teachers based on the challenges they met in conducting researches with 76.5% accuracy is given by the function

Status score = -0.851 Knowledge + 0.382 Financial Aspect + 0.154 Time Allotment + 0.095 Self-advancement + 0.019 Family support + 0.208 Proximity/Distance/Accessibility,

where the status is classified as not completed when score is below -0.104 and identified to be able to complete when the score is above it.

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