

## RESEARCH CAPABILITIES AND ENGAGEMENT OF PUBLIC ELEMENTARY SCHOOL TEACHERS IN ZONE 1, SCHOOLS DIVISION OF ZAMBALES, PHILIPPINES

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### ABSTRACT

*Despite extensive empirical research linking research capability and competitiveness in the context of the educational sector, little attention has focused on teachers' engagement. This paper investigated the research capabilities and engagement among two hundred sixty-seven teachers. This study employed the descriptive research design using an adopted and modified survey questionnaire. The study used a survey questionnaire as a research tool in determining the research capabilities and engagement of respondents as the basis of crafting the proposed intervention program. The study findings revealed that the majority of the teacher-respondents were female, in their middle adulthood, earned master's degree units, Teacher I, Teacher-Researcher, attended a limited number of seminars/trainings, with limited engagement in conducting research, and not engaged in presenting their research outputs and publication. The teacher-respondents were moderately capable in doing research and engaged in conducting research. The proposed intervention plan has been conceptualized to further develop the research capabilities of teachers. Schools are encouraged hiring and allocating item for a research coordinator who will supervise research engagement of teachers.*

**Keywords:** Research, Research Capabilities, Research Engagement, School Teachers, Education Sector.

## **INTRODUCTION**

Global empirical studies suggest that teacher engagement in research significantly contributes to school development and student achievement (Cordingley, 2015). DepEd Order No. 39 s. 2016 entitled Adoption of the Basic Education Research Agenda provided guidance to DepEd and its stakeholders in the conduct of education research and the utilization of results. Furthermore, in the Masinloc District, teaching innovation that focuses on research has become a regular practice in public schools as a means of assisting teachers in their professional development and growth. Teachers, on the other hand, are having difficulty with basic information and processes. Nonetheless, research has a substantial impact on teachers' professional development and instructional effectiveness. Despite the fact that the Department of Education employs numerous research-active employees, it has only recently made organized and systematic initiatives to include a large number of teachers in teacher research events such as conferences and festivals. Many teachers with no history in research or publications have struggled with this conscious growth; however others have been able to perform some classroom-based research or action research development as a result of it. It has allowed support mechanisms to be established in every institution to facilitate research while not being prohibitively expensive.

Thus, the purpose of this study was to determine the capabilities and level of engagement in doing action research from the perspective of public elementary school teachers of Zone 1, Schools Division of Zambales.

## **STATEMENT OF THE PROBLEM**

This study investigated the research capabilities and engagement of public elementary school teachers in Zone 1, Schools Division of Zambales. Specifically, it sought answers to the following questions:

1. What is the profile of the teacher-respondents in terms of:
  - 1.1. sex;
  - 1.2. age;
  - 1.3. educational attainment; and
  - 1.4. position/designation;
2. How do the teacher-respondents describe their research capabilities in terms of:
  - 2.1. conceptualizing skills;
  - 2.2. designing skills;
  - 2.3. data processing skills; and
  - 2.4. technical skills?
3. How is the level of engagement of teacher-respondents in conducting researches in terms of:

- 3.1. time;
- 3.2. resources;
- 3.3. administrative support; and
- 3.4. training?
4. Are there significant differences on research capabilities by the elementary school teachers in doing action research when teachers are grouped according to their profile?
5. Are there significant differences on the level of engagement by the elementary school teachers in doing research when teachers are grouped according to their profile?
6. Is there a significant relationship on teachers' capabilities and engagement in doing research?
7. What intervention plan may be proposed as a result of the study?

## **METHODOLOGY**

This study employed the descriptive research design using an adopted and modified survey questionnaire. It is used to describe the characteristics of a population and collects data that are used to answer a wide range of what, when, and how questions pertaining to a particular population or group (Question Pro, 2021). In descriptive research, a study data can be used to identify the prevalence of particular problems and the need for new or additional services to address these problems, identify areas in need of additional research and relationships between variables that require future study, and can generate rich datasets on large and diverse samples (Research Connections, 2021). Thus, descriptive-survey design was most appropriate in this study because it would determine the capabilities and level of engagement among teachers towards action research.

The capabilities and level of engagement in doing action research among teachers were described in this study using indicators identified in an adapted survey-questionnaire that served as the main instrument.

## RESULTS AND DISCUSSION

### 1. Profile of Teacher-respondents

**Table 1**

**Frequency and Percentage Distribution on the Teacher-respondents' Profile Variable**

Profile Variables		Frequency (f)	Percentage (%)
Sex	Male	44	16.50
	Female	223	83.50
<b>Total</b>		<b>267</b>	<b>100.00</b>
Age (Years) Mean = 40.32 years old	61 & Above	3	1.10
	56-60	25	9.40
	51-55	19	7.10
	46-50	30	11.20
	41-45	43	16.10
	36-40	61	22.80
	31-35	38	14.20
	26-30	31	11.60
	21-25	17	6.40
<b>Total</b>		<b>267</b>	<b>100.00</b>
Profile Variables		Frequency (f)	Percentage (%)
Educational Attainment	Doctorate degree	3	1.10
	With units in Doctorate	1	0.40
	Master's degree	51	19.10
	With units in Master's degree	116	43.40
	Bachelor's degree	96	36.00
<b>Total</b>		<b>267</b>	<b>100.00</b>
Position	Teacher I	143	53.60
	Teacher II	48	18.00
	Teacher III	61	22.80
	Master Teacher I	10	3.70
	Master Teacher II	5	1.90
<b>Total</b>		<b>267</b>	<b>100.00</b>
Research Designation	Teacher-Coordinator	4	1.50
	Research Committee Officer	2	0.70
	Research Committee Member	3	1.10
	Research Facilitator/Teacher	4	1.50
	Teacher-Researcher	254	95.10
<b>Total</b>		<b>267</b>	<b>100.00</b>
Number of Seminars/ Trainings Attended Mean = 2.08 or 2	6 & Above	31	11.60
	4-5	15	5.60
	2-3	88	33.00
	0-1	133	49.80
<b>Total</b>		<b>267</b>	<b>100.00</b>
Number of Research Outputs Conducted Mean = 1.14 or 1	6 & Above	1	0.40
	4-5	14	5.20
	2-3	55	20.60
	0-1	197	73.80
<b>Total</b>		<b>267</b>	<b>100.00</b>
Number of Research Outputs Presented	4-5	2	0.70
	2-3	27	10.10

<b>Mean = 0.73 or 1</b>	0-1	238	89.10
	<b>Total</b>	<b>267</b>	<b>100.00</b>
<b>Profile Variables</b>		<b>Frequency (f)</b>	<b>Percentage (%)</b>
Number of Research Outputs Published <b>Mean = 0.66 or 1</b>	6 & Above	4	1.50
	4-5	2	0.70
	2-3	5	1.90
	0-1	256	95.90
	<b>Total</b>	<b>267</b>	<b>100.00</b>

### Sex

The majority of the teacher-respondents are females with two hundred twenty-three (223) or 83.50% while there are only forty-four (44) or 16.50% who are male teacher-respondents.

The data is in congruent with the World Bank data which shows that the percentage of women in the teaching profession appears to be rising steadily. 65.73% of teachers are females as of 2017 and 87.54% of teachers are females as of 2024 (World Bank, 2024)

### Age

In terms of age, it can be noted that the highest frequency of respondents belongs to age group 36-40 years old with sixty-one (61) responses or 22.80%. This is followed by forty-three (43) or 16.10% who belongs to age group 41-45 years old; thirty-eight (38) or 14.20% belongs to age group 31-35 years old; thirty-one (31) or 11.60% belongs to age group 26-30 years old; thirty (30) or 11.20% belongs to age group 46-50 years old; twenty-five (25) or 9.40% belongs to age group 56-60 years old; while seventeen (17) or 6.40% belongs to age group 21-25 years old. The lowest frequency of respondents was noted to age group 61 years old & above with only three (3) or 1.10%. The computed mean age of the teacher-respondents was 40.32 years' old which clearly signifies that the typical respondent is in their middle adulthood.

According to Lachman (2015) that the middle- aged adults are often omitted from research on adult development and aging. Possible reasons for the lack of attention to middle age are considered and recommendations for ways to increase research on midlife are suggested to generate new knowledge and to dispel the myths.

### Educational Attainment

Most of the respondents earned units in Master's degree with one hundred sixteen (116) or 43.40%; ninety-six (96) or 36.00% are Bachelor's degree holders; fifty-one (51) or 19.10% are Master's degree holders; three (3) or 1.10% are Doctorate degree holders; while only one (1) or 0.40% earned units in Doctorate.

According to Horn & Jang (2017) that there is an effect of having a master's degree (relative to only a bachelor's degree) on research capabilities vary by the level of schooling as well as the congruence between the major field of study and the research subject matter.

## Position

Majority of the teacher-respondents with one hundred forty-three (143) or 53.60% are Teacher I; sixty-one (61) or 22.80% are Teacher III; forty-eight (48) or 18.00% are Teacher II; ten (10) or 3.70% are Master Teacher I while only five (5) or 1.90% are Master Teacher II.

Teachers in the DepEd are ranked after they applied when there is an open ranking. They are ranked based on criteria as to performance rating, experience, outstanding accomplishments, education, training, potential, and psycho-social as per Department Order 66, series of 2007. Research is one key factor in the promotion of teachers in DepEd.

## Research Designation

The research designation of most of the respondents is Teacher-Researcher with two hundred fifty-four (254) or 95.10% of the responses; four (4) or 1.50% are Teacher-Coordinators and Research Facilitators/Teachers, respectively; three (3) or 1.10% are Research Committee Members and only two (2) or 0.70% are Research Committee Officers.

Research in education is necessary in order to provide a basis for educational planning. It is one of the main fields that should be embedded in higher education curriculum. With regard to this, research-based education has lately received increasing interest both among researchers in higher education and in public discussion. Through these experiences, teachers develop the requisite knowledge and skills to become effective classroom leaders capable of implementing the national reform agenda. Research designations are evident among schools to serve as coordination with teachers (Eid, 2014).

## Number of Seminars/Trainings Attended

In terms of number of seminars/trainings attended, majority of the respondents attended 0-1 seminars/trainings with one hundred thirty-three (133) or 49.80% of the responses; eighty-eight (88) or 33.00% attended 2-3 seminars/trainings; thirty-one (31) or 11.60% attended 6 & above seminars/trainings and it can be noted that only fifteen (15) or 5.60% attended 4-5 seminars/trainings. The computed mean number of seminars/trainings attended by the teacher-respondents was 2.08 or 2 seminars/trainings.

According to Ibao (2017) that the teachers are required to attend trainings and seminars that can increase their academic faculty, enhance their teaching skills and communication and develop their teaching personality and research capabilities.

## Number of Research Outputs Conducted

Most of the respondents have 0-1 number of research outputs conducted with one hundred ninety-seven (197) or 73.80% of the responses; fifty-five (55) or 20.60% have 2-3 number of research outputs conducted; fourteen (14) or 5.20% have 4-5 number of researcher outputs conducted; while only one (1) or 0.40% has 6 & above number of research outputs conducted. The computed mean number of research

outputs conducted by the teacher-respondents was 1.14 or 1. The findings signify that the respondents are not engaged in conducting research outputs.

With professional growth and development as one of the key result areas for the individual teacher’s performance commitment and review, doing action research has already become part of the annual performance appraisal for all teachers (Ulla, Barrera & Acompañado, 2017).

**Number of Research Outputs Presented**

The typical teacher-respondents had presented 0-1 number of research outputs with two hundred thirty-eight (238) or 89.10%; twenty-seven (27) or 10.10% presented 2-3 research outputs; while only two (2) or 0.70% presented 4-5 research outputs. The computed mean number of research outputs presented by the teacher-respondents was 0.73 or 1. The findings signify that the respondents are not engaged in presenting their research outputs.

With professional growth and development as one of the key result areas for the individual teacher’s performance commitment and review, doing action research has already become part of the annual performance appraisal for all teachers (Ulla, Barrera, & Acompañado, 2017).

**Number of Research Outputs Published**

In terms of number of research outputs published, majority of the respondents published 0-1 research outputs with two hundred fifty-six (256) or 95.90% of the responses; five (5) or 1.90% published 5 research outputs; four (4) or 1.50% published 6 & above research outputs; while only two (2) or 0.70% published 4-5 research outputs. The computed mean number of research outputs published by the teacher-respondents was 0.66 or 1. The findings signify that the respondents are not engaged in publication.

According to Dayagbil, Palompom, Garcia & Olvido (2021) that the narratives which the respondents submitted were done through online open-ended questions researches to allow them to share their experiences and challenges. These were analyzed using a thematic approach to best provide a clear description of the experiences and challenges.

**2. Level of Engagement of Teachers in Conducting Researches**

**Table 2**  
**Level of Engagement of Teachers in Conducting Researches**

Dimensions		Overall Weighted Mean	Descriptive Equivalent	Rank
1	Time	2.69	Agree	4
2	Resources	2.85	Agree	3
3	Administrative Support	2.97	Agree	2
4	Trainings	3.04	Agree	1
<b>Grand Mean</b>		<b>2.89</b>	<b>Agree</b>	



It can be noted that the teacher-respondents agreed on their level of engagement in conducting researches in terms of “Trainings”, as manifested with the highest overall weighted mean of 3.04 (rank 1); followed by “Administrative Support”, with an overall weighted mean of 2.97 (rank 2); “Resources”, with an overall weighted mean of 2.85 (rank 3); and “Time”, with the lowest overall weighted mean of 2.69 (rank 4). The grand mean of responses of teachers on the level of their engagement in conducting researches was 2.89, with qualitative interpretation of “Agree”.

The study of Agatep & Villalobos (2020) claimed that the respondents perceived the availability of facilities, time, training, funding, other resources and support from agency in doing research as “Moderately Available”.

The result manifests that the teacher-respondents agreed on their trainings received that increases the level of their engagement in conducting researches while needing attention on time allotment in order for them to increase their engagement in conducting researches.

According to these researchers, teacher educators’ understanding of what research is and their capacity to define the relationship between researching and teaching can inform their attitudes toward research and a clear understanding of their roles as researchers. Not surprisingly, it has been proven that when teacher educators highly value research, they are more likely to pursue research-related activities, including reading research materials, attending various research skill-based workshops and programs, applying research knowledge in practice, and conducting their own research (Kyaw, 2021).



### 3. Test of Difference on Research Capabilities of Elementary School Teachers in Doing Research when Grouped According to their Profile

**Table 3**

**Test of Difference on Research Capabilities of Elementary School Teachers in Doing Research when Grouped According to their Profile**

Profile Variables	Conceptualizing Skills		Designing Skills		Data Processing Skills		Technical Skills	
	F	Sig	F	Sig	F	Sig	F	Sig
Sex	0.011	0.918	0.109	0.741	0.038	0.845	0.038	0.845
Age	1.208	0.294	1.133	0.341	0.985	0.448	0.985	0.448
Educational Attainment	2.718	0.030	4.686	0.001	2.044	0.089	2.044	0.089
Position	1.622	0.169	2.000	0.095	2.687	0.032	2.687	0.032
Research Designation	0.965	0.427	0.775	0.542	1.202	0.310	1.202	0.310
Number of Seminars/Trainings Attended	3.266	0.022	3.488	0.016	4.499	0.004	4.499	0.004
Number of Research Outputs Conducted	3.806	0.011	4.116	0.007	1.722	0.163	1.722	0.163
Number of Research Outputs Presented	3.011	0.051	2.684	0.070	2.754	0.065	2.754	0.065
Number of Research Outputs Published	1.620	0.185	1.296	0.276	2.075	0.104	2.075	0.104

#### Conceptualizing Skills

The computed P-value for sex (0.918), age (0.294), position (0.169), research designation (0.427), number of research outputs presented (0.051) and number of research outputs published (0.185) were greater than ( $>$ ) 0.05 Alpha Level of Significance, hence the Null Hypothesis is accepted. Therefore, there is no significant difference on research capabilities of teachers in doing action research in terms of conceptualizing skills when respondents are grouped according to sex, age, position, research designation, number of research outputs presented and number of research outputs published. On the other hand, the P-value for educational attainment (0.030), number of seminars/trainings attended (0.022) and number of research outputs conducted (0.011) were lower than ( $<$ ) 0.05 Alpha Level of Significance, therefore the Null Hypothesis is rejected and that there is significant difference on research capabilities of teachers in doing action research in terms of conceptualizing skills when they are grouped according to educational attainment, number of seminars/trainings attended and number of research outputs conducted. The result implies that the research capabilities of teachers in doing research in terms of conceptualizing skills differs in terms of their educational attainment, number of seminars/trainings attended and number of research outputs conducted.

The analysis of variance test revealed that there is significant difference on the research capabilities of

respondents in writing research proposal when grouped according to position and highest educational attainment; significant in writing publishable research paper when grouped according to sex, position and research seminars/trainings attended; significant in the availability of facilities, time, training, funding, other resources and support from agency in doing research when grouped according to sex, position and research seminars/trainings attended (Agatep & Villalobos, 2020).

### **Designing Skills**

The computed P-value for sex (0.741), age (0.341), position (0.095), research designation (0.542), number of research outputs presented (0.070) and number of research outputs published (0.276) were greater than ( $>$ ) 0.05 Alpha Level of Significance, hence the Null Hypothesis is accepted. Therefore, there is no significant difference on research capabilities of teachers in doing research in terms of designing skills when respondents are grouped according to sex, age, position, research designation, number of research outputs presented and number of research outputs. On the other hand, the P-value for educational attainment (0.001), number of seminars/trainings attended (0.016) and number of research outputs conducted (0.007) were lower than ( $<$ ) 0.05 Alpha Level of Significance, therefore the Null Hypothesis is rejected and that there is significant difference on research capabilities of teachers in doing research in terms of designing skills when they are grouped according to educational attainment, number of seminars/trainings attended and number of research outputs conducted.

The result implies that the research capabilities of teachers in doing research in terms of designing skills differs in terms of their educational attainment, number of seminars/trainings attended and number of research outputs conducted. The result of this study coincides with the findings of (Manila, Dayanan, Barlis & Fajardo, 2022) that there were significant variations in their research capabilities when grouped by their position, highest educational attainment, and level of seminars attended.

### **Data Processing Skills**

The computed P-value for sex (0.845), age (0.448), educational attainment (0.089), research designation (0.310), number of research outputs conducted (0.163), number of research outputs presented (0.065) and number of research outputs published (0.104) were greater than ( $>$ ) 0.05 Alpha Level of Significance, hence the Null Hypothesis is accepted. Therefore, there is no significant difference on research capabilities of teachers in doing action research in terms of data processing skills when respondents are grouped according to sex, age, educational attainment, research designation, number of research outputs conducted, number of research outputs presented and number of research outputs published. On the other hand, the P-value for position (0.032) and number of seminars/trainings attended (0.004) were lower than ( $<$ ) 0.05 Alpha Level of Significance, therefore the Null Hypothesis is rejected

and that there is significant difference on research capabilities of teachers in doing research in terms of data processing skills when they are grouped according to position and number of seminars/trainings attended.

According to Caingcoy, (2020) that the mentoring and action planning skills, motivation to write research, attitudes toward research, and the number of studies completed by teachers were the correlates of their research capability at different magnitudes of the relationship. Notably, the research capability of teachers had a low, negative but significant relationship with their age and accumulated years of service.

### Technical Skills

The computed P-value for sex (0.845), age (0.448), educational attainment (0.089), research designation (0.310), number of research outputs conducted (0.163), number of research outputs presented (0.065) and number of research outputs published (0.104) were greater than ( $>$ ) 0.05 Alpha Level of Significance, hence the Null Hypothesis is accepted. Therefore, there is no significant difference on research capabilities of teachers in doing action research in terms of technical skills when respondents are grouped according to sex, age, educational attainment, research designation, number of research outputs conducted, number of research outputs presented and number of research outputs published. On the other hand, the P-value for position (0.032) and number of seminars/trainings attended (0.004) were lower than ( $<$ ) 0.05 Alpha Level of Significance, therefore the Null Hypothesis is rejected and that there is significant difference on research capabilities of teachers in doing action research in terms of technical skills when they are grouped according to position and number of seminars/trainings attended. The result implies that the research capabilities of teachers in doing research in terms of technical skills differ in terms of their position and number of seminars/trainings attended.

The study of Farin et al (2021) had similar finding that the number of seminars/trainings can improve research capability as to technical skills. However, Tamban and Maningas (2020) contradicts this result which indicates that position and number of seminars attended had no effect on research capabilities.

#### 4. Test of Difference on the Level of Engagement of Elementary School Teachers in Doing Research when Grouped According to their Profile

Table 4

##### Test of Difference on the Level of Engagement of Elementary School Teachers in Doing Research when Grouped According to their Profile

Profile Variables	Time		Resources		Administrative Support		Training	
	F	Sig	F	Sig	F	Sig	F	Sig
Sex	0.299	0.585	0.021	0.886	0.250	0.618	0.061	0.806
Age	1.271	0.259	1.164	0.322	1.066	0.387	0.909	0.510
Educational Attainment	1.671	0.157	1.544	0.190	1.477	0.210	1.066	0.374
Position	1.048	0.383	2.412	0.059	1.049	0.382	2.404	0.059
Research Designation	0.585	0.674	0.778	0.540	0.484	0.747	0.851	0.494
Number of Seminars/Trainings Attended	2.516	0.059	3.364	0.019	3.022	0.030	2.959	0.033
Number of Research Outputs Conducted	0.122	0.947	0.223	0.881	0.243	0.866	1.159	0.326
Number of Research Outputs Presented	1.226	0.295	1.323	0.268	0.243	0.866	1.543	0.216
Number of Research Outputs Published	1.560	0.199	1.259	0.289	0.894	0.445	1.595	0.191

#### Time

The computed P-value for sex (0.585), age (0.259), educational attainment (0.157), position (0.383), research designation (0.674), number of seminars/trainings attended (0.059), number of research outputs conducted (0.947), number of research outputs presented (0.295) and number of research outputs published (0.199) were greater than ( $>$ ) 0.05 Alpha Level of Significance, hence the Null Hypothesis is accepted. Therefore, there is no significant difference on the level of engagement of teachers in doing research in terms of time when they are grouped according to sex, age, educational attainment, position, research designation, number of seminars/trainings attended, number of research outputs conducted, number of research outputs presented and number of research outputs published. The result implies that there is no statistically detected difference on the level of engagement of teachers in doing research in terms of time as to their sex, age, educational attainment, position, research designation, number of seminars/trainings attended, number of research outputs conducted, number of research outputs presented and number of research outputs published.

There is a need for more rigorous research into the mechanisms of time management and the factors that contribute to its effectiveness. The ways in which stable time management behaviors can be established also deserves further investigation (Claessens, Rutte & Roe, 2007).

#### Resources

The computed P-value for sex (0.886), age (0.322), educational attainment (0.190), position (0.059), research designation (0.540), number of research outputs conducted (0.881), number of research outputs

presented (0.268) and number of research outputs published (0.289) were greater than ( $>$ ) 0.05 Alpha Level of Significance, hence the Null Hypothesis is accepted. Therefore, there is no significant difference on the level of engagement of teachers in doing research in terms of resources when they are grouped according to sex, age, educational attainment, position, research designation, number of research outputs conducted, number of research outputs presented and number of research outputs published. On the other hand, the P-value for number of seminars/trainings attended (0.019) was lower than ( $<$ ) 0.05 Alpha Level of Significance, therefore the Null Hypothesis is rejected and that there is significant difference on the level of engagement of teachers in doing research in terms of resources when they are grouped according to number of seminars/trainings attended. The result implies that the level of engagement of teachers in doing research in terms of resources differs as to their number of seminars/trainings attended. Furthermore, there is no statistically detected difference on the level of engagement of teachers in doing research in terms of resources in terms of their sex, age, educational attainment, position, research designation, number of research outputs conducted, number of research outputs presented and number of research outputs published.

### **Administrative Support**

The computed P-value for sex (0.618), age (0.387), educational attainment (0.210), position (0.382), research designation (0.747), number of research outputs conducted (0.866), number of research outputs presented (0.404) and number of research outputs published (0.445) were greater than ( $>$ ) 0.05 Alpha Level of Significance, hence the Null Hypothesis is accepted. Therefore, there is no significant difference on the level of engagement of teachers in doing research in terms of administrative support when they are grouped according to sex, age, educational attainment, position, research designation, number of research outputs conducted, number of research outputs presented and number of research outputs published.

On the other hand, the P-value for number of seminars/trainings attended (0.030) was lower than ( $<$ ) 0.05 Alpha Level of Significance, therefore the Null Hypothesis is rejected and that there is significant difference on the level of engagement of teachers in doing research in terms of administrative support when they are grouped according to seminars/trainings attended. The result implies that the level of engagement of teachers in doing research in terms of administrative support differs as to the seminars/trainings they attended.

When teacher development promotes self-understanding, risk taking is promoted. Hargreaves and Fullan add another way is to provide teachers with the knowledge and skill development which will increase their ability to provide opportunities for the children to learn. Although knowledge and skills-based approaches can be criticized as top-down mandates that ignore the teachers' experience and voice, it can

be beneficial if its use is limited to focusing on the methods that are understandable and usable by teachers in the classroom, as well as presented with ongoing administrative support (Meister & Willyerd 2010).

**Training**

The computed P-value for sex (0.806), age (0.510), educational attainment (0.374), position (0.059), research designation (0.494), number of research outputs conducted (0.326), number of research outputs presented (0.216) and number of research outputs published (0.191) were greater than (>) 0.05 Alpha Level of Significance, hence the Null Hypothesis is accepted. Therefore, there is no significant difference on the level of engagement of teachers in doing research in terms of trainings when they are grouped according to sex, age, educational attainment, position, research designation, number of research outputs conducted, number of research outputs presented and number of research outputs published. The finding conforms with the study of Vallescas and Oted (2023) that teachers had significant difference as to research engagement when grouped according to seminar/training attended. On the other hand, the P-value for number of seminars/trainings attended (0.033) was lower than (<) 0.05 Alpha Level of Significance, therefore the Null Hypothesis is rejected and that there is significant difference on the level of engagement of teachers in doing research in terms of training when they are grouped according to seminars/trainings attended.

**5. Test of Relationship on Teachers’ Capabilities and Engagement in Doing Research**

**Table 5**

**Pearson Product Moment Coefficient of Correlation to Determine Relationship between Teachers’ Research Capabilities and Level of Engagement in Doing Research**

Sources of Correlations		Research Capabilities	Level of Engagement	Decision / Interpretation
<b>Research Capabilities</b>	Pearson Correlation	1	0.731**	<b>High Positive Relationship Reject Ho</b>
	Sig. (2-tailed)		0.000	
	N	267	267	
<b>Level of Engagement</b>	Pearson Correlation	0.731**	1	
	Sig. (2-tailed)	0.000		
	N	267	267	
**. Correlation is significant at the 0.01 level (2-tailed).				

This further implies that as the level of engagement in doing researches among teachers increases, there is a high tendency that their research capabilities also increase. Similar findings were found by Vallescas and Oted (2023) that there was significant relationship between teachers’ research capability and engagement. The result signifies that there is significant relationship between the research capabilities and level of engagement in doing researches of teachers. This means that planning,



processing, writing, presentation, and publication were significantly correlated with teachers' research capability. This further signifies that the more the teachers are engaged in research, the more they will develop their capability in doing research

Teachers play a vital role in ensuring quality education delivery. They are best known for the role of educating students in their care. The most common role teachers' play in the classroom is to dispense pertinent knowledge to students by following the curriculum. Teachers use various methods such as lecture, small group activities and hands-on learning activities to dispense knowledge to students. Beyond that, they serve many other roles in the classroom (Bonney, Amoah, Micah, Ahiameny & Lemaire, 2015).

## **6. Proposed Intervention Program Based from the Result of the Study**

The proposed intervention plan has been conceptualized to further develop the research capabilities of teachers in terms of conceptualizing skills, designing skills, data processing skills and technical skills.

### **Rationale**

Conducting research contributes to the continuous improvement of education. It provides validated evidence to help ensure that educational policy decisions are consistent. . The Department of Education (DepEd) is mandated 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.

Based from the result of the study, the teachers were moderately capable in terms of conceptualizing research problems, designing skills, data processing and in terms of other technical skills including their engagement in research. Thus this, intervention program on capability building for the teachers will be conducted.

The training will be conducted to equip the teachers of the Department of Education with the necessary and relevant skills in doing research. Specifically it will have the following objectives: To enhance their knowledge in conceptualizing research problems; To enable the teachers to identify the appropriate research designs; To upgrade their technical skills in data processing and analysis and result interpretation.



**Table 6**

**Proposed Intervention Program to further Develop the Research Capabilities of Teachers**

<b>Key Area</b>	<b>Objective</b>	<b>Specific Activities</b>	<b>Person(s) Involved</b>	<b>Time Frame</b>	<b>Proposed Budget</b>
Conceptualizing Skills	To capacitate teachers in developing a theoretical framework.	Attendance to seminars on how to develop theoretical framework during INSET (Phase 1)	School Heads Teachers Speakers	July 2022	15,000.00 Php
Designing Skills	To capacitate teachers in identifying and describing the locale, computation of population, and sampling techniques.	Training on the use of software for computation of respondents and sampling techniques for teachers. (Phase 2)	School Heads Teachers Experts	August 2022	15,000.00 Php
Data Processing Skills	To train teachers on statistical treatment of data for quantitative research.	Training on statistical treatment using computer software. (Phase 3)	School Heads Teachers Experts	September 2022	15,000.00 Php
Technical Skills	To capacitate teachers in organizing research using prescribed APA formatting.	Attendance to seminars in formatting researches using APA format. (Phase 4)	School Heads Teachers Speakers	October 2022	15,000.00 Php

**CONCLUSIONS**

Based on the foregoing results of the study, the researcher concluded that: The typical teacher-respondents are female, in their middle adulthood, earned master’s degree units, Teacher I, Teacher-Researcher, attended a limited number of seminars/trainings, with limited engagement in conducting research, and not engage in presenting their research outputs and publications. The teacher-respondents are moderately capable of doing research. The teacher-respondents agreed on their engagement in conducting research. There was a significant difference in research capabilities of teachers in doing research in terms of conceptualizing skills when grouped according to educational attainment, several seminars/training attended and number of research outputs conducted; significant in terms of designing skills when grouped according to educational attainment, number of seminars/training attended and number of research outputs conducted; significant in terms of data processing skills when grouped according to position and number of seminars/training attended; and significant in terms of technical skills when grouped according to position and number of seminars/training attended. There was a



significant difference in the level of engagement of teachers in doing research in terms of resources when grouped according to several seminars/training attended; significant in terms of administrative support when grouped according to seminars/training attended; and significant in terms of training when grouped according to seminars/training attended. There was a significant relationship between the research capabilities and the level of engagement in doing research among teachers. The proposed intervention plan has been conceptualized to further develop the research capabilities of teachers.

## **RECOMMENDATION**

In view of the conclusion of the study, the following are recommended. The Department of Education may consider allotting time for teachers in doing researches to be included in their schedule. The Department of Education may consider allocating enough funds for research engagement of teachers. Schools may strengthen support for teachers in conducting researches by providing research needs. The proposed intervention programs and trainings maybe implemented to further enhance research capabilities of teachers. Schools are encouraged hiring and allocating item for a research coordinator who will supervise research engagement of teachers.

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