



## Research Capability and Engagement among Public Elementary Teachers

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### ABSTRACT

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One important factor for successful conduct of research is the researcher's research capability and attitude. This study aimed at determining the research capability, and engagement among public elementary teachers. Moreover, it determined the relationship between the research capability and attitude and the level of research engagement of public elementary teachers of the three districts in the Division of Bukidnon. The study utilized a descriptive-correlational research design. A total of 85 teachers were surveyed using a modified instrument. Frequency and percentage distribution, weighted mean, Pearson Moment Correlation, and ANOVA were used for statistical treatment.

The study revealed that the teachers were highly capable in conducting research. However, the research engagement of the respondents did not have significant difference when grouped according to their profile such as age, sex, length of years in the service, and grade level handled. Further, position, highest educational attainment, research trainings attended, number of research activities done had significant relationship with research engagement. Additionally, lack of time and resources were the most common barriers and challenges they encountered in conducting action research.

Thus, this study concludes that conducting action research requires time, effort and sources. Hence, an action plan is developed to facilitate the teachers' research capability, attitude, and engagement to be implemented in the Division of Bukidnon.

### KEYWORDS:

action research, research capability, engagement, conduct of research, and challenges

### INTRODUCTION

Research is a concept that practitioners, managers, and strategy makers respect. However, more importantly, research is an academic action by education professionals who constantly advocate learning, finding out things, analyzing information, adapting behavior, improving modern demand of education principles and quality teaching (Biruk, 2013).

According to Hairon (2011), teachers are "superheroes in the school" due to the difficult nature of the work as they learn, unlearn, and relearn. Hence, despite hectic teaching, job-related duties, and classroom management, conduct of research is necessary for teachers in facing new and more challenges toward becoming better practitioners. In the case of elementary education in the Philippines, the Department of Education reaffirmed the fact that the primary

role of elementary education in the country is to generate and disseminate knowledge. Hence, the accountability and function to undergo research and related scholarly investigations in various disciplines should not be delegated to the back seat.

Additionally, Department of Education Order no. 16, s. 2017 "In support of the DepEd policy development process, research agenda, and policy program development and implementation, the Department of Education continues to promote and strengthen the culture of research in basic education. DepEd hereby establishes the Research Management Guidelines (RMG) to provide guidance in managing research initiatives in the national, regional, schools division, and school levels.

Furthermore, action research provides a chance for teachers to evaluate themselves in schools in an informal manner. It is conducted to investigate what effects their teaching have on students' learning, how they could work better with teachers, and how can they work to change the whole school for the better. Johnson (2015) noted that by doing action research, teachers may gain a better perspective into their own teaching and students' learning because the

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changes made in instruction are based on a teachers' own research.

Finally, one important factor for successful conduct of research is the researcher's research capability and attitude (Pamatpat, 2016). Thus, the main objective of this study was to find out the research capabilities and attitudes of the teachers of the three districts of Bukidnon. Survey of research capabilities and attitudes of the teachers could ascertain the current state of the teachers' skills and competences in doing research activities. Further, establishing visibly the research capabilities and attitudes of the identified teachers would provide the school with wise decisions on which research domains to develop and which ones to keep to achieve quality in research practice.

Hence, this study determined the research attitude, research capability, and level of research engagement of the teachers of the three districts of the Division of Bukidnon.

## **METHODOLOGY**

The study used descriptive correlational design indescribing relationships among variables, without seeking to establish a causal connection. It was conducted in the public elementary schools of the three districts of Bukidnon. There were six schools of District 1, seven schools of District 2, and five schools of District 3. A total of 18 schools were involved in this study. Purposive sampling design was used since only teachers who finished their master's and doctorate degrees in the three districts of the Division of Bukidnon were considered as the respondents of the study.

Survey questionnaire was used in this study which consists of five parts. However, revisions on some of the items were made to fit to the elementary school teachers. The result of the reliability coefficient of 0.918 indicated that the instrument is reliable. Frequency and percentage distribution, weighted mean, Pearson Moment Correlation, and ANOVA were used for statistical treatment.

## **RESULTS AND DISCUSSION**

This section presents the data gathered, its analysis, interpretation, and discussion.

### **Teachers' Demographic Profile**

The result reveals that there are more teachers of District 1, 2 and 3 who belonged to the age bracket thirty-one to forty (31 to 40) years old. This finding means that most of the teachers in these three districts are on the middle age. Moreover, this means that the teachers in Districts 1, 2, and 3 who are master's and doctorate degree holders are on the middle age. This suggests that these teachers who are the respondents of the study had finished their master's and doctorate degree during their early age in teaching.

Majority of the respondents were females (83.53%) with a frequency of 71 while only 14 or 16.47% were males. The data signifies that there were more female than male teachers who were master's and doctorate degree holders of

the three districts. This implies that there are more female teachers who pursued their education in graduate studies.

Moreover, the result discloses that there are more teachers of the three districts had served the Department of Education for eleven to fifteen years. This implies that most of the teachers who were master's and doctorate degree graduates had served the department for quite a number of years. These eleven to fifteen years may have provided the teachers enough experience in teaching but not in writing an action research.

Further, the result reveals that majority of the respondents were master's degree holders. This signifies that the teachers are really interested to continue their graduate studies, and they have valid reasons why they did not proceed to enroll in highest level of education which is doctorate degree. This implies that the teachers in these three districts have the interest to pursue doctorate degree, but there are reasons that hinder them.

For position, majority or forty-six (46) out of 85 respondents belonged to Teacher III position in the Department of Education. Though the bulk of the teachers were 11-15 years in service, they remained as Teacher III. This result discloses that most of the teachers of the districts were not promoted to a higher position even though they were master's and doctorate degree holders and had served the Department of Education for quite a number of years.

Moreover, there were more teachers who were Grade VI with twenty (20), comprising 23.52% of the total respondents. This reveals that the greater part of the respondents of the three districts were Grade VI teachers. This finding exposes that most of the teachers who are master's and doctorate degree holders are assigned to teach in the higher years. This means that those teachers handling Grade VI pupils are master's and doctorate degree holders. This implies that they have gained enough knowledge and experiences that would meet the needs and expectations of the pupils in the higher years.

Regarding the number of research done, the finding reveals that most of the respondents of the three (3) districts had conducted only two (2) researches for the last 3 years. This implies that most of the teachers of the districts were not into research writing.

In terms of number of trainings attended, majority of the respondents or seventy-one (71) (83.53%) attended only one (1) training on conducting action research. This reveals that the greater part of the respondents of the three districts attended only one (1) action research training per year. This implies that most of the teachers seldom participated in action research trainings because content knowledge and pedagogies were the most conducted trainings in the District In-Service during summer and semester's break.

**Teachers’ Research Capability**

Table 1 indicates that the respondents strongly agreed on the indicators. This means that they were highly capable of research as revealed in the indicators.

This implies that they are familiar with the steps in conducting action research because Master Teachers are required to conduct action research yearly as needed in their

performance in Individual Performance Commitment and Review Form (IPCRF).

This result suggests that the teachers of these districts engaged in research though it is revealed in the previous result that they had undergone only one training on research per year. This means that the teachers’ experience and exposure on research during their graduate studies are enough to be highly capable in conducting research.

**Table 1. Mean and Standard Deviation of Teachers’ Research Capability**

As a teacher...	Mean	SD	Qualitative Description	Qualifying Interpretation
1. I can identify instructional problems in the school.	3.54	0.50	SA	Highly Capable
2. I can transform instructional problems into a good research problem.	3.31	0.53	SA	Highly Capable
3. I can define and check carefully the research title.	3.34	0.64	SA	Highly Capable
4. I can formulate the conceptual framework of the study based on the objectives.	3.36	0.63	SA	Highly Capable
5. I can prepare review of literature objectively.	3.37	0.57	SA	Highly Capable
6. I can determine research design to be used.	3.27	0.60	SA	Highly Capable
7. I can identify appropriate statistical tools to determine the extent of reliability of the instrument.	3.24	0.68	A	Moderately Capable
8. I can interpret the reliability of coefficient in the pilot test of the instrument.	3.18	0.69	A	Moderately Capable
9. I can arrange research setting, respondents and spell out the procedures and conditions.	3.28	0.62	SA	Highly Capable
10. I can use the Computer (SPSS) or other statistical software to analyze data.	3.17	0.71	A	Moderately Capable
11. I can formulate the specific findings of the study.	3.27	0.62	SA	Highly Capable
12. I can draw conclusions accurately.	3.32	0.62	SA	Highly Capable
13. I can draw recommendations properly.	3.36	0.64	SA	Highly Capable
14. I observe the research format.	3.36	0.59	SA	Highly Capable
15. I can write bibliography properly.	3.36	0.65	SA	Highly Capable
16. I can document the cited literatures correctly.	3.30	0.63	SA	Highly Capable
<b>Over All Mean</b>	<b>3.32</b>	0.55	<b>SA</b>	Highly Capable

Legend: 3.26-4.0-Strongly Agree; 2.51-3.25-Agree; 1.76-2.50-Disagree; 1.0-1.75- Strongly Disagree

The overall mean of 3.32 shows that the teachers strongly agreed on the statements indicating they were highly capable in research. This signifies that the teachers have enough knowledge in doing research. However, they need more trainings on reliability testing and appropriate use of statistical tools. This finding is similar with the study conducted by Abarro and Mariño (2016) which revealed that teachers are moderately capable in writing a research proposal and publishable research paper or article. They stressed that these results implied that teachers shall be provided with trainings especially on the application of American Psychological Association (APA) in writing a research proposal.

**Teachers’ Level of Research Engagement**

Table 2 indicates the mean scores of the teachers’ level of research engagement. As indicated in the table, the mean of teachers’ level of research engagement on planning is 3.21, described as satisfactory. This means that the respondents were moderately engaged in research planning. Moreover, the teachers’ mean level of research engagement on processing is 3.18, which is satisfactory. This reveals that the respondents were moderately engaged in research processing. This implies that teachers are engaged in research processing which are on collecting and analyzing data.

Table 2. Mean and Standard Deviation of Teachers’ Level of Research Engagement

Indicators of Research Engagement	Mean	SD	QD	Interpretation
<b>Planning Stage:</b>				
A.1 Identifying and limiting the topic	3.22	0.56	S	Moderately Engaged
A.2 Gathering information	3.23	0.54	S	Moderately Engaged
A.3 Reviewing related literature	3.21	0.59	S	Moderately Engaged
A.4 Developing a research plan	3.18	0.60	S	Moderately Engaged
<b>MEAN</b>	<b>3.21</b>	<b>0.55</b>	<b>S</b>	<b>Moderately Engaged</b>
<b>Processing Stage:</b>				
B.1 Collecting data	3.23	0.59	S	Moderately Engaged
B.2 Analyzing data	3.12	0.63	S	Moderately Engaged
<b>MEAN</b>	<b>3.18</b>	<b>0.58</b>	<b>S</b>	<b>Moderately Engaged</b>
<b>Writing Stage:</b>				
C.1 Developing an action plan	3.18	0.56	S	Moderately Engaged
C.2 Sharing and communicating results	3.11	0.58	S	Moderately Engaged
C.3 Reflecting on the process	3.12	0.57	S	Moderately Engaged
<b>MEAN</b>	<b>3.14</b>	<b>0.55</b>	<b>S</b>	<b>Moderately Engaged</b>
<b>Presentation of Research Conducted</b>				
E.1 Local level	3.10	0.65	S	Moderately Engaged
E.2 National level	2.64	0.61	S	Moderately Engaged
E.3 International level	2.50	0.73	S	Moderately Engaged
<b>MEAN</b>	<b>2.75</b>	<b>0.58</b>	<b>S</b>	<b>Moderately Engaged</b>
<b>Publication of Research Conducted</b>				
F.1 Local level	2.95	0.68	S	Moderately Engaged
F.2 National level	2.57	0.64	S	Moderately Engaged
F.3 International level	2.48	0.70	BS	Less Engaged
<b>MEAN</b>	<b>2.67</b>	<b>0.60</b>	<b>S</b>	<b>Moderately Engaged</b>
<b>OVER ALL</b>	<b>2.99</b>	<b>0.49</b>	<b>S</b>	<b>Moderately Engaged</b>

Legend: 3.26-4.0 Very Satisfactory; 2.51-3.25 Satisfactory; 1.76-2.50 Below Satisfactory; 1.0-1.75 Not Satisfactory

Further, the teachers’ mean level of research engagement on writing was 3.14, described as satisfactory. This indicates that the respondents were moderately engaged in research writing. This suggests that teachers were engaged in research processing which were developing an action plan, sharing and communicating results, and reflecting on the process. Additionally, the teachers’ mean level of research engagement on presentation was 2.75, described as satisfactory. This indicates that the respondents were moderately engaged in research presentation. This implies that the teachers are presenting their action research at the local, national, and some international levels. Furthermore, the teachers’ mean level of research engagement on publication was 2.67, described as satisfactory. This indicates that the respondents were moderately engaged in research publication. This implies that

the teachers have only few publications of their action research conducted.

The overall mean level of teachers’ research engagement on Planning, Processing, Gathering, Presentation, and Publication was 2.99, and described as satisfactory which means that the teachers were moderately engaged. This signifies that the teachers were moderately engaged in action research. This suggests that not all teachers are doing research. Only some are doing because it is a requirement for promotion. This means that majority of the teachers are not so involved with research. This implies that teachers should be motivated to be engaged in research because conducting research would help them improve their teaching skills.

Scholars believe that research engagement is a very useful vehicle that, unlike any other form of professional development, is always open to teachers. Campbell and

Jacques’ (2014) exploratory study revealed that teachers believed that research engagement influenced their professional development in different ways. Subject of potential benefits of research engagement has also been the focus of speculation and discussion. Moreover, Roberts (2013) believes that research engagement can reduce teachers’ feelings of frustration and isolation.

**Research Engagement**

Table 3 presents the relevant test of correlation statistics to verify the claim that there is no significant correlation between the research engagement and research attitude.

**Table 3. Correlation Coefficients and Significance of Relationship between Research Attitude and Research Engagement**

Areas	R	p – value	Decision	Interpretation
Research Planning	0.48	0.00	Reject	Significant
Research Processing	0.47	0.00	Reject	Significant
Research Writing	0.41	0.00	Reject	Significant
Research Presentation	0.55	0.00	Reject	Significant
Research Publication	0.51	0.00	Reject	Significant

a. Significant at 0.05 level

Results indicate that all domains of research engagement were significantly correlated to the teachers’ attitude. As shown, research presentation ( $r_{85} = 0.554, p < 0.05$ ) got the highest correlation to the teachers’ research attitude. This was followed by the research publication ( $r_{85} = 0.510, p < 0.05$ ), and research planning ( $r_{85} = 0.489, p < 0.05$ ). Further, research processing got ( $r_{85} = 0.477, p < 0.05$ ), and lastly, research writing got ( $r_{85} = 0.411, p < 0.05$ ).

Further, data disclose that all areas of research engagement were moderately correlated with the teachers’ research attitude. This means that planning, processing, writing, presentation, and publication were significantly correlated with teachers’ research attitude. This implies that teachers’ research engagement was affected by their attitude in conducting action research.

Particularly, the attitude towards research basically means a detailed study of thinking, feeling and the person’s

behavior towards research. According to Papanastasiou (2015), it is important to identify the attitudes towards research so that a positive attitude can be developed among students, and hence their learning can be facilitated in turn.

**Teachers’ Research Capability and Research Engagement**

Table 4 presents the significant test of correlation statistics to verify the claim that there is no significant correlation between the research engagement and research capability.

The results indicate that all domains of research engagement were significantly correlated to the teachers’ capability. As shown, research processing ( $r_{85} = 0.60, p < 0.05$ ) got the highest correlation to the teachers’ engagement. This was followed by the research planning ( $r_{85} = 0.60, p < 0.05$ ). All areas of research engagement were moderately correlated with the research capability.

**Table 4. Correlation Coefficients and Significance of Relationship between Research Engagement and Research Capability**

Areas	R	p – value	Decision	Interpretation
Research Planning	0.60	0.00	Reject	Significant
Research Processing	0.60	0.00	Reject	Significant
Research Writing	0.56	0.00	Reject	Significant
Research Presentation	0.52	0.00	Reject	Significant
Research Publication	0.43	0.00	Reject	Significant

Significant at 0.05 level

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.

The result is supported by the study of Bueno and Basilio (2019), which revealed that the research capability

training program consisting of various levels from lectures, hands-on workshop, writing, research articles for colloquium and possible publication should be fully implemented immediately and regularly monitors its effectiveness.



**Difference in Level of Research Engagement According to Profile**

The analysis of variance on the teachers’ research engagement when classified according to their demographic

profile is reflected in Table 5. As can be gleaned from the table, P- values of the result for research engagement have higher values than 0.05 level of confidence.

**Table 5. Analysis of Variance of the Research Engagement by Age**

Research Engagement	F-value	P – value	Decision	Interpretation
Research Planning	1.30	0.28	Failed to reject	Not Significant
Research Processing	0.35	0.78	Failed to reject	Not Significant
Research Writing	0.69	0.55	Failed to reject	Not Significant
Research Presentation	2.74	0.04	Reject	Significant
Research Publication	3.26	0.02	Reject	Significant
<b>Overall</b>	<b>1.80</b>	<b>0.15</b>	<b>Failed to reject</b>	<b>Not Significant</b>

Significant at 0.05 level

The data provide no sufficient evidence to reject the claim of the null hypothesis. This signifies that the research *planning, research processing and research writing* is not significantly different with the demographic profile in terms of age. This signifies that research engagement of the teachers does not differ in terms of their age. Regardless of their age, they can make and be engaged with research. This means that the teachers’ background in their graduate course in thesis and dissertation writing equipped them so that they can plan, process, and write their action research.

Further, the data provide sufficient evidence to reject the claim of the null hypothesis. This signifies that *research presentation and research publication* is significantly different with the demographic profile in terms of age. This implies that whatever age are the teachers, they can present and publish their action research at the local, national and international levels. Moreover, the overall result of teachers’

research engagement when grouped according to demographic profile in terms of age is not significantly different. This means that teachers’ research engagement is not affected by their age. This implies that age is not a factor affecting the research engagement of the teachers.

Several studies have indicated that publishing activity varies by age (Rauber & Ursprung, 2007). Some researchers have in particular explored the possibility that the individual’s scientific productivity follows a life cycle: productivity increases when the scientist is young, peaks around middle age and subsequently declines (Lissoni et al., 2011).

Table 6 shows the result of analysis of variance on the research engagement of teachers according to their sex. The data provide no sufficient evidence to reject the claim of the null hypothesis.

Table 6. Analysis of Variance on the Research Engagement by Sex

Independent Variables	F-value	P – value	Decision	Interpretation
Research Planning	0.15	0.69	Failed to reject	Not Significant
Research Processing	0.73	0.39	Failed to reject	Not Significant
Research Writing	0.05	0.82	Failed to reject	Not Significant
Research Presentation	0.52	0.47	Failed to reject	Not Significant
Research Publication	0.60	0.43	Failed to reject	Not Significant
<b>Overall</b>	<b>0.49</b>	<b>0.48</b>	<b>Failed to reject</b>	<b>Not Significant</b>

a Significant at 0.05 level

This signifies that the research engagement of the teachers does not significantly differ when grouped according to sex. This means that both male and female teachers have equal opportunities to conduct action research.

However, findings from studies of Eloy et al. (2013) and Nygaard (2015) have indicated significant gender differences in terms of research engagement, in favor of men. Women's disadvantage was attributed to factors that may negatively affect women's scholarly productivity, which is important, and often critical, for staying on an academic career path. These factors are typically sorted into three categories. First, an institutional climate that is unfriendly to women impedes their integration in professional networks.

Consequently, compared to their male counterparts, women tend to be less motivated or enjoy fewer opportunities to be productive scholarly, have less access to resources or assistance in their research and have less support and encouragement from colleagues.

Table 7 displays the result of analysis of variance on the teachers' research engagement according to number of years in the service. The data provide no sufficient evidence to reject the claim of the null hypothesis. This signifies that research engagement is not significantly different when the teachers are grouped according to their number of years in the service.

Table 7. Analysis of Variance on the Research Engagement by Length of Service

Independent Variables	F-value	P – value	Decision	Interpretation
Research Planning	0.69	0.63	Failed to reject	Not Significant
Research Processing	0.70	0.62	Failed to reject	Not Significant
Research Writing	0.62	0.68	Failed to reject	Not Significant
Research Presentation	0.76	0.57	Failed to reject	Not Significant
Research Publication	1.18	0.32	Failed to reject	Not Significant
<b>Overall</b>	<b>0.56</b>	<b>0.72</b>	<b>Failed to reject</b>	<b>Not Significant</b>

a Significant at 0.05 level

The result indicates that the number of years in the service has no effect with the level of research engagement of the teachers. This entails that the number of years served in

the Department of Education is not an assurance for the teachers to be engaged in research. Further, this result implies

that research engagement among teachers is not affected by the number of years in the service.

Kotrlik et al. (2002) found that length of service is a significant determinant of research engagement in terms of quantity and quality. Experience in teaching allows exposure to contemporary empirical and theoretical literature and to findings regarding issues relevant to teacher educators. Besides the research skills they tend to possess, experienced teacher educators are more likely to have the know-how for

acquiring assistance and resources (Hedjazi & Behravan, 2011).

Table 8 presents the results of analysis of variance on the research engagement according to position. The result provides sufficient evidence to reject the claim of the null hypothesis. However, in research publication, it is not significant. This indicates that research publication varies according to the position of the teachers.

**Table 8. Analysis of Variance on the Research Engagement by Position**

<b>Independent Variables</b>	<b>F-value</b>	<b>P – value</b>	<b>Decision</b>	<b>Interpretation</b>
Research Planning	4.53	0.02	Reject	Significant
Research Processing	5.14	0.03	Reject	Significant
Research Writing	4.45	0.01	Reject	Significant
Research Presentation	2.99	0.02	Reject	Significant
Research Publication	2.20	0.07	Failed to reject	Not Significant
<b>Overall</b>	<b>4.94</b>	<b>0.01</b>	<b>Reject</b>	<b>Significant</b>

a Significant at 0.05 level

The overall results of the analysis of variance on research engagement according to position reveals significant. This result signifies that the research engagement of the teachers is significantly different when they are grouped according to demographic profile in terms of position. This exposes that the respondents' position is a factor in research. This means that the higher the position of the teachers in the Department of Education the more they are engaged in research. Further, this result implies that research engagement among teachers is affected by the position in the Department of Education. This is because Master Teachers have to conduct action research for they are required at least one action research every year for their Individual Performance Commitment Review Form (IPCRF). However, lower position like Teacher I, II and III are opted to conduct action research.

The study of Leahey (2006) found that as position or rank increased, productivity in research decreased. This may indicate that once worries about achieving high rank are

removed, the motivation of higher position teachers to publish decreases due to the few rewards they are offered for high productivity. It may also indicate that the increased management and administrative responsibilities that those with higher academic rank usually have distracted them from research activity.

Table 9 presents the result of analysis of variance on the research engagement of the teachers according to highest educational attainment. Among the five areas of research engagement, the result indicates that there is significant difference in research planning, research processing, and research writing. This indicates that teachers' level of research engagement particularly on planning, processing and writing differ when they are grouped according to educational attainment. On the other hand, there is no significant difference in research presentation and research publication. This means that teachers' level of research engagement particularly on presentation and publication does not differ when grouped according to educational attainment.



Table 9. Analysis of Variance on the Research Engagement by Highest Educational Attainment

Independent Variables	F-value	P – value	Decision	Interpretation
Research Planning	7.93	0.00	Reject	Significant
Research Processing	5.31	0.02	Reject	Significant
Research Writing	6.00	0.01	Reject	Significant
Research Presentation	1.99	0.16	Failed to reject	Not Significant
Research Publication	3.63	0.06	Failed to reject	Not Significant
<b>Overall</b>	<b>6.42</b>	<b>0.01</b>	<b>Reject</b>	<b>Significant</b>

a Significant at 0.05 level

The overall result indicates sufficient evidence to reject the claim of the null hypothesis. This signifies that the research engagement of the teachers is significantly different when grouped according to their highest educational attainment. This means that the educational attainment of the teachers is a contributing factor as to their level of research engagement. This is because the respondents of the study were master’s and doctorate degree graduates who have the knowledge in conducting action research. This implies that the higher the educational attainment of the teachers, the more they are engaged to research. The result is supported with the study of Bueno and Basilio (2019) that the Master Teachers’ should continue upgrading their educational attainment by

attending graduate and postgraduate education in their area of specialization, and by attending research-related conferences (Sanyal, 2015).

Table 10 shows the result of analysis of variance on the research engagement according to number of research activities done. The result provides sufficient evidence to reject the claim of the null hypothesis. This result signifies that the teachers’ level of research engagement is significantly different when they are grouped according to demographic profile in terms of number of research done. This is because the more the teachers conducted action research; the more they are engaged in research.

Table 10. Analysis of Variance on the Research Engagement by Number of Research Activities Done

Independent Variables	F-value	P – value	Decision	Interpretation
Research Planning	8.84	0.00	Reject	Significant
Research Processing	7.54	0.00	Reject	Significant
Research Writing	8.91	0.00	Reject	Significant
Research Presentation	3.42	0.02	Reject	Significant
Research Publication	3.36	0.02	Reject	Significant
<b>Overall</b>	<b>8.39</b>	<b>0.00</b>	<b>Reject</b>	<b>Significant</b>

a Significant at 0.05 level

According to Creswell (2016), research productivity is the extent to which lecturers engage in their own research and publish scientific articles in referred journals, conference proceedings, writing a book or a chapter, gathering and analyzing original upgrades of qualifications or professional training, where necessary, can also increase teacher readiness and effectiveness in doing research.

Table 11 presents the result of analysis of variance on the research engagement according to number of research trainings attended.

The data on Table 11 provide sufficient evidence to reject the claim of the null hypothesis. This means that the teachers’ level of research engagement is significantly different when grouped according to their demographic profile in terms of number of research trainings attended.

**Table 11. Analysis of Variance on the Research Engagement by Number of Research Trainings Attended**

<b>Independent Variables</b>	<b>F-value</b>	<b>P – value</b>	<b>Decision</b>	<b>Interpretation</b>
Research Planning	8.05	0.00	Reject	Significant
Research Processing	7.59	0.00	Reject	Significant
Research Writing	8.05	0.00	Reject	Significant
Research Presentation	3.31	0.02	Reject	Significant
Research Publication	2.87	0.04	Reject	Significant
<b>Overall</b>	<b>7.52</b>	<b>0.00</b>	<b>Reject</b>	<b>Significant</b>

a Significant at 0.05 level

This result reveals that attending trainings on research is significantly important for research engagement. This further implies that the more the teachers attended trainings, the more they are engaged in research. This is the same with the study of Bueno and Basilio (2019) which stated that the importance of research in education and the teaching profession has been overly emphasized with the mechanisms such as policies and programs already in place, and that teachers are capable of undertaking research because of attending trainings and International research-related conferences.

Table 12 presents the results of analysis of variance on the research engagement according to grade level handled. The data provide no sufficient evidence to reject the

claim of the null hypothesis. This signifies that teachers’ level of research engagement is not significantly different when grouped according to demographic profile in terms of grade level handled.

The result indicates that grade level handled has no effect with the teachers’ level of research engagement. This entails that any grade level handled by the teacher in the Department of Education is not an assurance for the teachers to be engaged in research. Further, this result implies that research engagement among teachers is not affected by their grade level handled. This is because regardless of the grade level handled by the teachers, they have equal chance of conducting and engaging in research.

Table 12. Analysis of Variance on the Research Engagement by Grade Level Handled

Independent Variables	F-value	P – value	Decision	Interpretation
Research Planning	0.51	0.79	Failed to reject	Not Significant
Research Processing	0.65	0.68	Failed to reject	Not Significant
Research Writing	0.56	0.76	Failed to reject	Not Significant
Research Presentation	1.04	0.40	Failed to reject	Not Significant
Research Publication	1.58	0.16	Failed to reject	Not Significant
<b>Overall</b>	<b>0.80</b>	<b>0.57</b>	<b>Failed to reject</b>	<b>Not Significant</b>

a Significant at 0.05 level

Further, the Department of Education provided the guidelines for all teachers in conducting research. Particularly, Department of Education Order No. 39, s.2016 known as the Basic Education Research Agenda (BESRA) will guide all Department of Education researchers from schools, divisions, regions, and central office. In the same way, the agenda will also be shared for consideration of external partners, such as research institutions, and non – government organizations, among others. However, this document will not limit research inquiries. Rather, it will encourage researchers to go beyond, especially for pressing and emerging education issues not covered by the Agenda.

**CONCLUSION**

This study concludes that conducting action research requires time, effort, and source that hinder them to finish on time. The teachers had enough knowledge and can do research, but because of so many works and ancillaries given to them, they had some negative attitude in conducting an action research and resulted to a moderate engagement in research.

Thus, this study affirmed Bandura’s self-efficacy theory which refers to an individual’s standard or conviction that one can successfully achieve at a designated level an academic task or attain a specific academic goal. Hence, in the accomplishing of research, ones’ feelings, way of thinking and motivation ultimately affect his capability and attitude and eventually the result of his research.

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