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Research Article

Cultivating The Research Culture Mediated by Motivation Factors in Enhancing Teachers' Performance in Conducting Action Research

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ABSTRACT

Nowadays, the Department of Education recently displayed an anticipated and overwhelming interest in developing a research culture. DepEd promoted action research and encouraged teachers to engage, thus this is timely to address the learning gaps during pandemic. With this set up, teachers ought to be involved in it to foster evidence-based practice and raise research productivity. The major objective of this study was to ascertain how the research culture and motivating elements of action research to improve teachers' research performance in the selected elementary school.

The study was conducted at sixty-two schools in the division of San Pablo City using the ex post facto research design. A total of 750 elementary teachers randomly selected comprised the respondents of the study.

The correlation between motivational factors and research skills and research productivity of teachers were all significantly related. The highest correlation in terms of data analysis can be seen evidently in personal satisfaction. This reveals that teachers engaged in research activities when chances are given to utilize their skills and the administration supports the presentation of research papers. The performance and research productivity of the teachers' research abilities and efforts have a significant indirect impact on the motivational variables involved in the research. The end result of this study signifies that the relationship between the research organizational culture and teacher research performance could be enhanced by improving the motivational factors and research skills.

Keywords: Research culture, Research Motivational Factors, Teachers' Research Performance, Research Productivity, Research Skills

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Introduction

A research culture is analogous to a plant, which must be compatible with the soil and location in which it is planted; the ground must be well-tilled and fertilized; during its formative stages, it may need to be staked and pruned; and regular watering is required (Samosa 2020).

Research culture and the faculty's level of research awareness have a moderate impact on research productivity. However, faculty members are highly conscious of research, and the research culture is a fact and evident in its qualitative elements. According to a positive research culture, institutions that exhibit cooperation, have pleasant relationships, and allow individuals to reach their full potential have higher research productivity (Callo and Sahagun 2018).

The current lack of educational research output in Philippine Basic Education is a result of the country's low national literacy score on the 2018 Program for International Student Assessment (PISA). As part of the Basic Education Research Agenda, teachers are urged to conduct educational research and use the results to construct plans, policies, and programs (Capulso, 2020).

The Department of Education currently encourages school workers, particularly teachers, to conduct action research in order to improve their research abilities. Because it gives candidates a context-based foundation to apply their learning inputs in their different settings, fostering critical reflection and practice, action research has emerged as a viable alternative in institutions for teacher education programs, claim Valdez and Lapinid (2015).

For the purposes of this study, research is a methodical process of looking into a phenomenon in order to add to the body of knowledge already available. The "research culture" of school organizations, on the other hand, relates to how teachers, administration, students, and the community view research and its applicability to teachers' performance as a result of the programs and guidelines put in place when carrying out such duties.

This study concentrated on the relationship between motivational factors among instructors in the San Pablo City Division and the

influence of research culture on research productivity. According to studies, culture refers to the conduct that academic community members such as teachers and administrators must exhibit in order to fit in and live up to norms. In this study, the research culture was perceived in five dimensions: intellectuality, impulse control, disengagement, esprit-de-corp, and consideration. A positive school research culture determines teachers' research performance in terms of the number of research projects undertaken, their role in research projects undertaken, the number of published research projects, and several innovations, prototypes, and inventions produced.

While HEIs support a culture of research in their areas of expertise in response to the CHED mandate, the Department of Education's (DepEd) fundamental education institution does not place a high priority on research because its top priority is to ensure that its elementary and secondary students have a foundational understanding of literacy. Nevertheless, the DepEd values research and encourages teachers to engage in it as one of the requirements for teacher advancement (Wong, 2020).

The Basic Education Research Fund's revised rules were published in DepEd Order No. 43, s. 2015 to show off the department's continued initiatives to support evidence-based policy formation and decision-making in delivering outstanding education. It shows that, despite being enabled, the research culture in primary educational institutions has not yet been fully embraced (Wong 2020). In the majority of circumstances, research is done largely for compliance, promotion, and necessity. Research-based innovations and enhancements enable teachers actually acquire the necessary knowledge and abilities. This is also true for the majority of teachers, who want to find solutions to the problem inside the classroom and discover new strategies in teaching. However, most teachers in the subject of have found it exceedingly difficult to generate new information and use that knowledge in conducting action research.

Objectives of the Study

This study dealt with motivation factors in conducting action research and the cultivation

of research culture associated with teachers' performance in San Pablo City.

It aimed to accomplish the following objectives in particular.

1. To determine the perceived description of research culture according to intellectuality, impulse control, engagement, esprit-de-corps and consideration to assess the teachers' research level of performance.
2. To determine the perceived description of level of teachers' motivation in conducting action research in terms of utilization of research output (dissemination in local/international conferences), personal satisfaction, support of the administration, inter and intra-institutional collaboration, financial rewards and incentives and chance of promotion (Ranking system).
3. To determine the perceived level of teachers' performance according to the research skills and research productivity.
4. To evaluate the significant relationship of motivational factors and teachers' research performance in terms of research productivity and research skills.
5. To analyze the mediating effects of the motivational factors in conducting action research to research culture and the teacher's performance.

Methodology

The study was a descriptive correlational research design to identify and describe teachers' perceptions to attain its objectives. It determined the relationship in cultivating the research culture mediated by motivation factors in enhancing teachers' performance in conducting action research.

The descriptive method was utilized to ascertain how the teachers felt about the dominant research culture in their individual schools. in terms of a)intellectuality, b)impulse control, c) disengagement, d) esprit-de-Corps and e) consideration; teacher's research performance as a) several research undertaken, b) roles in research undertaken, c) numbers of published research and d) several innovations, prototypes and inventions produced and the level of teacher's motivation in conducting research, namely: a) utilization of research output (dissemination in local/international

conferences) b)personal satisfaction, c)support of the administration d)inter and intra-institutional collaboration d)financial rewards and incentives and e)chance of promotion (ranking system).

The study employed descriptive correlation to identify and describe teachers' perceptions. It used frequency count and percent ranking, mean, standard deviation, factor analysis and multiple regression analysis. After tabulating and identifying the survey respondent responses, the data description and analysis were carried out.

The correlational method was used in determining the significant relationship and interrelationship between and among prevailing research cultures in their respective schools, the level of teachers' motivation in conducting research and the teacher's research performance, respectively.

The Division of San Pablo City had 65 elementary schools, however only those that were selected were used for the study. The division's seven districts were represented by teachers who are actively teaching and in service during the academic year 2022-2023.

For this study, a questionnaire from Biruk (2013) and O'Connor for the part II, Greene and Anderson (2006) for the part III were modified, adapted and used. There are 4 parts in the questionnaire. Part I is about the profile of the respondents: age, gender, Education, civil status, length of service, academic rank, ethnicity, religion, number of teaching loads handled, salary, and academic rank; Part II refers to the perception of teachers regarding the research culture in their own organization/school namely: intellectuality, impulse control, disengagement, esprit-de-corps, and consideration. Part III is about the motivational factors of the teachers in doing action research in terms of: utilization of research output (dissemination in local/international conferences), personal satisfaction, support of the administration, Inter and intra-institutional collaboration, financial rewards and incentives and chance of promotion (ranking system). Part IV for measures teacher's research performance in quantitative aspects including the number of researches undertaken, role in researches undertaken, number of published research and number of

innovations, prototypes, inventions produced. The Likert scale of 1-5 was used to identify the perceived levels of, research culture, motivation factors and research skills.

The researcher prepared a letter for the Schools Division Superintendent for the permission to administer the study. The letter was checked by the researcher's adviser for refinement. Once the endorsement letter from the division was released, the researcher personally handed the letter to the school heads of various elementary schools in the division to seek permission for the distribution of the

questionnaire to the respondents. The questionnaire was converted to google forms. After the approval, the researcher personally asked the support of the school head for the efficient distribution of the link of the questionnaires.

The researcher conducted the study. Data were gathered, collected and tabulated for statistical treatment.

The collected data were examined and utilized descriptive statistics such as mean and standard deviation. In addition, Pearson's Correlation, t-test, and mediation analysis using process macro was applied.

Results and Discussions

Part I. Descriptive Analysis of Research Culture

Table 1. Summary Table of the Descriptive Analysis of the Perceived Level of Research Culture

Research Culture Dimensions	Mean	SD	Verbal Interpretation
Intellectuality	4.27	.60	High Level
Impulse Control	4.35	.57	High Level
Engagement	4.38	.56	High Level
Esprit-de-Corps	4.29	.60	High Level
Consideration	4.33	.61	High Level
Overall	4.32	.53	High Level

Scale : 4.50 – 5.00-Extremely High Level; 3.50 – 4.49- High Level; 2.50 – 3.49-Moderate Level; 1.50-3.49-Low Level; 1.00-1.49 -Very Low Level

The summary of the teachers perceived level of research culture is shown in Table 1. It is exhibited that the teachers generally have high level of research culture as shown in the resulting overall mean of 4.32 with standard deviation of 0.53. It can also be seen that they have the highest level of research culture in terms of engagement with a mean of 4.38 and standard deviation of 0.56.

This implies that the teachers have high level of research culture in terms of engagement because they perceived that activities related to teaching and research are equally important. Despite the fact the action research requires a lot of works, many teachers consider it as valuable because it helps to improve and develop their professional skills as result of research studies.

On the other hand, Impevedo and Malik (2016) clearly stated that to be a teacher may not develop positive attitudes toward research because many teachers believe that conducting scientific research is tedious, time consuming

and will take a lot of patience and resources in order to complete a research task.

Data further shows that impulse control as one of the dimensions of research culture suggests that teachers perceived that action research is essential. It led to a number of significant findings and discover new pedagogies and teaching techniques. It goes on to explain that instructors typically use action research, an approach to educational research, to assess and ultimately enhance their teaching and learning strategies.

This illustrates that respondents perceived that research culture in terms of consideration defines action research which is appealing to teachers because it advances knowledge and encourages critical self-reflection, both of which help find answers to problems through research.

Conversely, intellectuality is significant culture but has the least mean score of 4.27 and standard deviation of 0.60. This reveals that intellectuality is existing but least asserted

among research culture. According to this interpretation, there is a high level of research culture, and teachers view action research as

an engaging educational strategy that gives them a sense of power when they examine and address issues in the classroom.

Part II. Descriptive Analysis on Level of Motivation in Conducting Action Research

Table 2. Summary Table of the Descriptive Analysis on Teacher's Level of Motivation in Conducting Action Research

Indicative Statement	Mean	SD	Verbal Interpretation
Utilization of Research Output	4.35	.577	Highly Motivated
Personal Satisfaction	4.27	.636	Highly Motivated
Support of the Administration	4.24	.703	Highly Motivated
Inter and Intra-institutional Collaboration	4.38	.566	Highly Motivated
Financial Rewards and Incentives	4.27	.597	Highly Motivated
Chance of promotion	4.40	.607	Highly Motivated
Overall	4.32	.540	Highly Motivated

Scale: 4.50-5.00-Extremely Motivated; 3.5-4.49- Highly Motivated; 2.50-3.49-Moderately Motivated 1.50-3.49-Low; 1.00-1.49-Very Low

As illustrated in Table 2, chance of promotion got the highest mean of 4.40 which implies that teachers tend to conduct action research for it is one of the points to get higher position in teaching. Support of the administration is a significant motivation but has the least rating of 4.24. This reveals that support of the administration is existing but least pronounced among the motivational factors of teachers in conducting action research.

The table shows the summary of the motivational factors of teachers in conducting action research. As illustrated, all the indicators are highly motivated. For the teacher respondents, the overall mean obtained of 4.32 with a verbal interpretation of highly motivated.

The findings indicate that the teacher respondents believed the utilization of research output, personal satisfaction, support of the administration, inter and intra-institutional collaboration, financial rewards and incentives and chance of promotion are good motivational drive for them to do action research. More often than not, people tend to work hard because of the benefits and rewards they received.

Narbate and Balila (2018), enlisted the factors that motivate the faculty to be involved in research were utilization of research; personal

satisfaction; build/expand network; research capability programs of the University; and support of the administration.

The results in the table reveal that chance of promotion has the highest mean of 4.40. This is followed by inter and intra-institutional collaboration which has mean of 4.38. Utilization of research output comes in third with a mean of 4.35 and fifth are personal satisfaction and financial rewards and incentives with the same mean of 4.27.

This indicates that chance of promotion is the most predominant motivational factor among the teacher respondents followed by inter and intra-institutional collaboration, utilization of research output, personal satisfaction and financial rewards and incentives.

According to Ulla (2017), teacher respondents had a favorable opinion of doing research and its advantages for their teaching style and students' learning. As a result, instructors' desire to further their careers drove their study.

Support of the administration is a motivational factor but has the least rating of 4.24 with standard deviation of 703. This reveals that support of the administration is existing but least asserted among motivational factors.

Part III. Descriptive Analysis of Teacher's Research Performance

Table 3. Summary Table of the Descriptive Analysis of Perceived Level of Research Skills

Indicative Statement	Mean	SD	Verbal Interpretation
1. Analyzing quantitative data.	4.20	.729	High Level
2. Analyzing qualitative data.	4.23	.754	High Level
3. Using technology in statistical analysis.	4.25	.740	High Level
4. Organizing and writing the findings	4.23	.742	High Level
5. Monitoring the activities using the data-gathering tools capable and methods.	4.24	.727	High Level
Overall	4.23	.6774	High Level

Scale : 4.50–5.00-Extremely High Level; 3.50–4.49-High Level; 2.50–3.49-Moderate Level; 1.50–3.49-Low Level; 1.00–1.49 -Very Low Level

The table further shows that high level of teachers' perception is seen in terms of inferring. It means there is a high level of research skills of the teachers in extracting new information from the gathered data and in searching for relevant literature on the chosen topic of research.

In the same table, the teacher respondents perceived high level of research skills in terms of data analysis. The data showed that high levels of indicators were required for performing action research, including teachers' expertise in using technology for statistical analysis, monitoring activities with data-gathering instruments and methodologies, arranging and publishing the findings, and analyzing quantitative data.

It can be gleaned also in the table that communication is a significant research skill terms but has the least rating. This reveals that communication is least asserted of all the research skills but still in a high level of perception. Additionally, high level of research skills was perceived by the teachers in terms of understanding the information gathered and present the result of the research and interacting with researchers to get new ideas being tried out by other teachers.

It implies that the high perception of teachers' research skills are the results of the research trainings they attended through online during the pandemic which enable them to learn more about action research and hone their research skills.

In addition, public school teachers must improve and expand their research skills so

would allow them to generate study results. However, they are unable to do so on their own, and the organization helps them.

Alumbro et al (2017), stressed that the teachers are very interested to attend seminar/workshop in research. However, teachers were generally engaged in developing research proposals on their own or in collaboration with other faculty, carrying out research on their own or in collaboration with other faculty, and presenting and publishing the findings. In addition, some other educators are taken aback by the idea of conducting research without financing or a research assistant.

In summary, teachers perceived that the research skills needed in conducting action research could be described as Problem-Solving, Inferring, Data Analysis.

As has been said (Salom, 2013 as cited by Caingcoy, 2020), possessing the research skills to conduct research is necessary for producing a research output. To do high-quality research, teachers must have the necessary sources of knowledge and information.

The data supported the finding of Anzaldo and Cudiamat (2019), probed in their studies that teachers are knowledgeable in writing action research in terms of its parts, different types and significance based on their agreement of the basic principles of writing research. It is suggested that continuous professional development focusing on research capacity building be done to upgrade and strengthen teachers' skills in writing educational research to improve the teaching and learning process.

IV. Correlation between Research Culture and Teachers' Research Performance

Table 4. Correlation between Organizational Culture and Teachers' Research Skills and Research-Related Activities

Research Culture	Research Skills and Research-Related Activities					
	Inferring	Communication	Problem-Solving	Data Analysis	Research Skills	Research Related Factors
Intellectuality	.708**	.691**	.684**	.684**	.727**	.136**
Impulse Control	.700**	.659**	.678**	.695**	.726**	.123**
Engagement	.701**	.689**	.687**	.686**	.725**	.128**
Esprit-de-Corps	.720**	.694**	.684**	.675**	.728**	.105**
Consideration	.717**	.695**	.705**	.707**	.745**	.148**
Organizational Culture	.783**	.757**	.759**	.761**	.806**	.141**

**. Correlation is significant at the 0.01 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed). Coefficients: .90 to 1.00 (-.90 to -1.00) Very high positive (negative) correlation; .70 to .90 (-.70 to -.90) High positive (negative) correlation; .50 to .70 (-.50 to -.70) Moderate positive (negative) correlation; .30 to .50 (-.30 to -.50) Low positive (negative) correlation; and .00 to .30 (.00 to -.30) negligible correlation

Table 4 presents the correlation between organizational culture dimensions and teachers' research skills and involvement. According to the results, the data disclosed that organizational culture in terms of intellectuality has high positive, and significant relationship with their research skills in inferring ($r=.708$, $p=0.01$), moderate positive and significant relationship with research skills in communication ($r=.691$, $p=0.01$), problem-solving ($r=.684$, $p=0.01$) and data analysis ($r=.684$, $p<0.05$).

It indicates that research culture in terms of intellectuality states that teacher finds action research an interesting and meaningful educational practice to extract new information from the gathered data as part of the inferring skills.

The finding reveals that the teachers need programs and assistance to acquire or improve the research skills in conducting the action research. This supports the contention that a research culture is not just established but has to be nurtured. Wong's (2019) findings revealed that the research capability of teachers can be explained by training attended related to research, attitudes toward research, and the knowledge about research.

The same table presents the correlation between organizational culture dimensions and

teachers' research skills and research related factors. According to the results, the data revealed that organizational culture in terms of esprit-de-corps has high positive, and significant relationship with their research skills in inferring ($r=.720$, $p=0.01$), moderate positive and significant relationship with research skills in communication ($r=.694$, $p=0.01$), problem-solving ($r=.684$, $p=0.01$) and data analysis ($r=.675$, $p=0.01$).

It implies that teachers in a school organization who are brought together by a strong sense of dedication and a visible excitement to support each other in conducting action research could more interested to involve in research activities and increase the research productivity. The ability of a teaching-force to uphold their faith in a system or in its objectives to develop a healthy research culture may increases their productivity and efficiency and their performance in terms of research performance of teachers.

It can be gleaned also in the table that the result in terms of organizational culture in terms of impulse control are significantly related in research skills ($r=.726$, $p=0.01$) and involvement ($r=.123$, $p=0.01$) were all significantly related. The highest correlation in terms

of research skills can be seen evidently inferring at $p=.01$ level.

It suggests that the research culture in the school or organization is of the utmost importance for the teachers to participate in training that will improve their research skills in doing action research and lead to major results, develop new pedagogies, and teach them new teaching strategies.

It shows that teachers implies a great deal of constraints, organizational restrictiveness and exhibit positive behaviors more in a school that has a good research culture where they are valued, loved, in solidarity, express themselves comfortably, share their joys and sorrows, support their professional development, and have strong cooperation and communication.

The same table also presents correlation between organizational culture in terms of engagement. According to the result, organizational culture as to engagement ($r=.701$, $p=0.01$) is significantly related in research skills (.725, $p=0.01$) and involvement ($r=.128$, $p=0.01$) at $p=.01$ level. There is high correlation in research skills in terms of inferring. With this, the responses of the teachers toward the different variables in terms of research skills can be seen.

The teachers used their advanced research skills to undertake action research after comparing these data descriptively with correlates of research culture. The implications for research administrators in schools include promoting research at the beginning of a teachers member's career.

According to the results on perceived data, the data revealed that organizational culture in terms of esprit-de-corps ($r=.720$, $p=0.01$) are significantly related in research skills($r=.728$, $p=0.01$) and research productivity ($r=.105$, $p=0.01$).

The results imply that the respondents' perceptions of organizational culture foster opportunities for teachers to share information

informally, foster teamwork and harmony, motivate teachers by rewarding good performance, ensure that leaders set an example for appropriate team behavior, and make sure that teachers assist one another when necessary.

The same table also presents correlation between organizational culture in terms of engagement. According to the result, organizational culture as to engagement ($r=.701$, $p=0.01$) are significantly related in research skills (.725, $p<0.05$) and involvement ($r=.128$, $p=0.01$) were all significantly related at $p=.01$ level. There is high correlation in research skills in terms of inferring. With this, the responses of the teachers toward the different variables in terms of research skills can be seen.

As a summary in the table that the result in terms of organizational culture is significantly related to research skills ($r=.806$, $p=.01$) and research-related activities ($r=.141$, $p<.01$).

The results of the finding may imply that organizational research skills in one educational institution are a great factor in attaining increased involvement, especially when a positive attitude is attained towards conducting action research. The high organizational culture motivates and encourages teachers to be involved in research-related activities.

It also implies that the primary goals of the research culture are institutional assistance, particularly when it comes to transmitting skills and encouraging continual learning. Teachers' interest in conducting research is also increased by general support and skill-development training from the pertinent technical experts.

It implies that cultivating research culture and developing research skills are directly related. It is concluded that teachers will acquire research skills if a suitable research culture is supported.

Table 5. Relationship between Motivational Factors and Teachers' Research Skills and Research Productivity

Motivational Factors	Research Skills and Research-Related Activities					
	Inferring	Communication	Problem-Solving	Data Analysis	Research Skills	Research Productivity
Utilization of Research Output	.724**	.686**	.707**	.678**	.737**	.751
Personal Satisfaction	.782**	.770**	.760**	.752**	.803**	.737**
Support of the Administration	.656**	.636**	.610**	.649**	.671**	.803**
Inter and Intra-institutional Collaboration	.748**	.707**	.709**	.683**	.749**	.671**
Financial Rewards and Incentives	.752**	.734**	.728**	.701**	.763**	.749**
Chance of promotion	.642**	.613**	.633**	.628**	.666**	.763**
Motivational Factors	.814**	.785**	.784**	.775**	.830**	.666**

**. Correlation is significant at the 0.01 level (2-tailed). Coefficients: .90 to 1.00 (-.90 to -1.00) Very high positive (negative) correlation; .70 to .90 (-.70 to -.90) High positive (negative) correlation; .50 to .70 (-.50 to -.70) Moderate positive (negative) correlation; .30 to .50 (-.30 to -.50) Low positive (negative) correlation; and .00 to .30 (.00 to -.30) negligible correlation

Table 5 tests the relationship between motivational factors, teachers' research skills and research productivity. Based on the table, each of the indicators for the level of motivational factors in conducting research is significantly related to the teachers' research skills ($r=.830^{**}$, $p < 0.05$) and research productivity such as inferring, communication, problem-solving and data analysis ($r=.666^{**}$, $p < 0.05$) as perceived by the teacher respondents at 0.01 level of significance.

It also reveals that teachers are encouraged to conduct action research because it is valuable to the teaching and learning process and positively impacts teaching. This could be possible if the school administrations give technical, administrative and financial support, the teaching workload is adjusted with research work, and the institution provides professional recognition to teachers who have completed, presented and utilized action research.

It explains that the ability of teachers to contribute high levels of effort toward the high level of research skills and research outputs, as conditioned by the capacity of the effort to comply with requirements and his or her environment, is recognized as the research

motivational factor. A motivated teacher willfully works hard to provide his or her best effort in supporting an action research project. Whether an organization works in a team environment or employs independent contractors, motivation plays a role in attaining goals and objectives. An organization must foster and sustain high levels of motivation that result in great performance if it wants to guarantee that its team members' workplace goals and values align with its purpose and vision.

It can also be gleaned that the result perceived by the respondents in terms of motivational factors terms of personal satisfaction in inferring result ($r=.782^{**}$, $p < 0.05$), communication ($r=.770^{**}$, $p < 0.05$), problem-solving ($r=.760^{**}$, $p < 0.05$) and data analysis ($r=.752$, $p < 0.05$) and research related activities ($r=.737^{**}$, $p < 0.05$) were highly positive and significant at the 0.01 level. There is a high positive correlation between the motivational factors regarding personal satisfaction, teachers' research skills and research-related activities.

This suggests that the teachers' research skills in monitoring the activities using the gathering tools capable and methods have a high relationship in terms of encouraging the

teachers to do action research because it is valuable to the teaching and learning process and supports their research endeavors.

Based on the results as perceived by the respondents in terms of motivational factors in terms of financial rewards and incentives in inferring results ($r=.752^{**}$, $p < 0.05$), communication ($r=.734^{**}$, $p < 0.05$), problem-solving ($r=.728^{**}$, $p < 0.05$) and data analysis ($r=.701$, $p < 0.05$) and research related activities ($r=.749^{**}$, $p < 0.05$) were highly positive and significant at the 0.01 level. There is a high positive correlation between the motivational factors regarding financial rewards and incentives, teachers' research skills and research-related activities.

It implies that teachers were motivated when the school provided professional recognition who completed action research and offered merit pay for publishing in research journals.

It can be gleaned from the table that the correlation of motivational factors in terms of utilization of research output in inferring results ($r=.724^{**}$, $p < 0.05$), communication ($r=.686^{**}$, $p < 0.05$), problem-solving ($r=.707^{**}$, $p < 0.05$) and data analysis ($r=.678$, $p < 0.05$) and research related activities ($r=.751^{**}$, $p < 0.05$) were high positive and significant at the 0.01 level. The highest correlation in terms of research skills can be seen in inferring.

It indicates that the support of the school's administration in the presentation of research papers at scholarly conferences motivates the teachers to develop the process of doing action research and collective evidence of research.

Based on the results as perceived by the respondents in terms of motivational factors in terms of inter and intra-institutional collaboration in inferring results ($r=.748^{**}$, $p < 0.05$), communication ($r=.707^{**}$, $p < 0.05$), problem-solving ($r=.709^{**}$, $p < 0.05$) and data analysis ($r=.683$, $p < 0.05$) and research related activities ($r=.671^{**}$, $p < 0.05$) were high positive and significant at the 0.01 level. There is a high positive correlation between the motivational factors regarding inter and intra-institutional collaboration, teachers' research skills and research-related activities.

The results of the findings may imply that in terms of conducting action research, the respondents find it more interesting as they felt the school leaders encouraged them in international presentations, and outstanding research work has been published. Teachers were given chances to utilize their skills, and the administration supported the presentation of research papers at scholarly conferences.

On the other hand, teachers should realize the value of research in their teaching profession and find the value of action research in the student's learning process. Thus, school management is a factor that affects teachers' performance in terms of research-related involvement to support the research endeavors of the teachers. Thus, adequate time is provided for research activities, and the teaching workload is adjusted with research work.

It can also be gleaned from the table that the correlation of motivational factors in terms of support of the administration in inferring results ($r=.656^{**}$, $p < 0.05$), communication ($r=.636^{**}$, $p < 0.05$), problem-solving ($r=.610^{**}$, $p < 0.05$) and data analysis ($r=.649$, $p < 0.05$) and research related activities ($r=.803^{**}$, $p < 0.05$) were moderately high positive and significant at the 0.01 level. The highest correlation in terms of research skills can be seen in inferring.

More so, the teachers were motivated to do action research if they were capacitated with the research skills through a series of training and top management encouraged teachers to do research works, and facilities to collaborate and access local and international researchers are available in the school /division.

Furthermore, recognition inspired the teacher to conduct action research such as the professional recognition of teachers, awards, potential rewards and points for the teachers to be promoted. Ulla et al. (2017) asserted that teacher-respondents had a positive perception of doing research and its benefits to their teaching practice and students' learning process. Thus, job promotion is the motivating factor why teachers do research.

Table 6. Mediation Analysis of Motivational Factors to the Relationship between Research Culture and Teachers' Research Performance

	Effect	SE	t	p	LLCI	ULCI
RCul→Motiv	0.8810	0.0180	47.9360	0.0000	0.8450	0.9170
Motiv→Rskills	0.4580	0.0340	13.4860	0.0000	0.3910	0.5250
RCul→Motiv→Rskills	0.4030	0.0430			0.3210	0.4900
Direct	0.3060	0.0340	8.8820	0.0000	0.2380	0.3730
Indirect	0.4030	0.0430			0.3210	0.4900
Total	0.7090	0.0190	37.2950	0.0000	0.6720	0.7460

R = .848; *R-sq* = .719; *F* (2,747) = 954.576, *p* < .001
RCul=Research Culture; *Motiv*=Motivational Factors; *Rskills*=Research Skills

The findings imply that research motivational factors as to problem-solving, utilization of research output, personal satisfaction, support of the administration, inter and intra-institutional collaboration, financial rewards and incentives and chance of promotion contribute to the cultivation of research organizational culture of the school in making teachers to be skilled in doing research. This means that if there is a good research culture in school, the greater is the probability of the teachers to be motivated in doing action research.

Moreover, creating enthusiasm for conducting research begins with exposure to a simple inquiry. To promote enthusiasm among future researchers, it requires an exposure to a wholesome research culture provided by the school. This assumption was supported by Paterson et. al, 2013 as cited by Narbarte 2013 that the benefits of this endeavor include a deeper understanding of research, an increased ability to critique research to inform clinical practice, and plant the seeds for the development of one's own professional research culture.

It can be gleaned also from the table that research motivational factors (*coeff*=0.4580 significant at *p*<.001) are significantly related to research skills of the teachers.

The finding implies that motivational factors have effect on the research skills of the teachers in terms of Inferring, Communication, Problem Solving and Data Analysis. This means that the variables of teachers' research motivation exposed positive effects on

teachers' research skills. Teachers gained additional knowledge and skills through their involvement in research, it made them more competent in the field of research, and action research kept them updated in the current issues/trends/discoveries related to the social concerns of the society, and research involvement enabled them to be an effective researcher.

The same table reveals a significant direct effect of organizational research culture of the school to research skills performance of the teachers (*coeff*= 0.3060, *p*<0.0001). It implies that the impact on teachers' research performance in terms of research productivity and research abilities is multiplied by a supportive research culture where teachers feel at ease conducting research.

It was supported by the study of Peng and Gao, 2019 that culture that encourages research might influence how productive and intrinsically motivated teachers are to do it.

Analysis reveals that the teachers' skills are affected by the research culture at their institutions. As a result, there is a direct, mediating effect. This further implies that the research skills of teachers in terms of research culture is solely dependent upon their level of motivation.

Therefore, it was asserted by Lejarde, 2017 through capacity development programs, instructors are said to have the opportunity to improve their knowledge and abilities. Action research considers the quality of efficient professional development that promotes students'

learning in the most common type of capacity building program. Teachers can concentrate on the individual requirements of the students in the classroom during action research. Additionally, it aids educators in critically and analytically assessing their own pedagogy and learning what works best to enhance instruction. Additionally, it offers reason for the activities taken, which will aid them in developing a repertory, identifying issues, and coming up with suggestions for improvement.

Similarly, the study confirms that the indirect effects of teachers research culture to motivational factors and research skills in ($\text{co-eff}=.4030$, $p < 0.001$). Thus, research motivational factors mediated the relationship between research organizational culture and teachers' research performance.

The independent variable and the mediator accounted for 71.9% of the variance in teachers' research culture. Subsequently, teacher' research skills displayed a significant impact on teachers' research skills, thus the study establishes mediation among variables.

In addition, according to Marcelo (2018), action research is a logical process to study and collect data that can help teachers and other educational personnel to recognize and develop their practice.

Thus, the relationship between organizational culture and motivation of teachers is important to ensure the effectiveness of learning process in schools.

Conclusions

Based on the findings of the study, the following conclusions were drawn:

1. The hypothesis stating that there is no a significant relationship between cultivation of research culture and the performance of teachers is **not sustained** in this study.
2. The hypothesis stating that there is no significant relationship singly or in combination between motivational factors in conducting action research mediate the effect of research culture and the teacher's performance is **not sustained** by the findings of this study.

Recommendations

The following suggestions are hereby made in light of the study's results and conclusions:

1. The findings show that research committee of research programs in schools or at the division level may need to consider to expose teachers in research and prioritize them for professional development so that they can ensure increased productivity. Enhancing teachers' attitudes about research and their drive to conduct research are equally important.
2. The findings reveal the implication that there may be need for the Schools Division to adapt these capacity-building activities at the division level in order to assist the instructors in improving their level of research proficiency. Such a program may also entail doing, presenting, and publishing the results of the teachers' research while also concentrating on improving their knowledge, attitude, and level of research anxiety.
3. The findings show to Increase the amount of mentorship and training done in order to produce high-quality research and create a useful strategy for teachers' professional development in order to increase their knowledge and research abilities.
4. The findings indicate that school administration may offer teachers financial and non-financial incentives as well as proper management assistance to improve their research techniques, attitudes, and capacity for distributing and publishing the findings in various media, we may provide teachers the motivation they need to do research.
5. Teachers have to keep improving their educational standards by taking graduate and postgraduate courses in their areas of expertise and by going to conferences connected to their study.
6. Findings reveal that the research capability training program, which includes lectures, practical workshops, and producing research papers for colloquium and potential publishing, should be completely implemented right away, and its success should be routinely assessed.

7. To improve the validity and dependability of the results of these investigations, follow-up research of this type may be done.

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