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Research Article

Teachers' Readiness and Supportive Environment Toward Better Research Productivity and Skills: Basis for a Policy Development on Research Program

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ABSTRACT

The main problem of the study was to develop a standard school support program to enhance the implemented basic research program at San Jose National High School. Specifically, the determine the teachers' level of readiness in research, the extent do the School Factors affect the teachers' participation in research, the extent is the perceived supportive environment affect the level of research competency of teachers, Level of Competency of teachers in conducting research, the perceived level of Research Writing skills of the teachers. It identified the relationship between the teachers' level of competency in research and the perceived level of the teachers' readiness to conduct research and the effect of school factors, the relationship between the extent of school factors affecting participation in the conduct of research and challenges in conducting research, level of research productivity, and level of research skills and whether the perceived level of supportive environment significantly mediate the relationship between teacher's level of readiness and the level of research productivity and level of research skills. The study was descriptive with a researcher-made questionnaire as the instrument of the study. The questionnaire was administered to 661 teachers in the Division of San Pablo City for school year 2022-2023. The data collected were treated using mean scores, standard deviation, Pearson product moment correlation, simple regression, and multiple regression analysis. Results show following findings: the teachers are all well equipped with the desired readiness needed to conduct research studies; school-related factors are very important in influencing teachers' engagement in research investigations; teacher's ability to do research projects is greatly influenced by their cognitive ability, the school's support and assistance, the principal's leadership skills, and the research culture at their institution; the teachers were all well-versed in each of the parts of a research paper; the teachers' re-

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search skills is significantly related to the teachers' readiness to conduct research and the effect of school factors; the relationship between effect of school factors in research engagement and challenges in conducting research is significant as well as with research productivity and research skills; and the supportive environment significantly mediate the relationship between the teachers' level of research readiness and level of teachers' research skills but does not significantly mediate the teachers' level of research readiness and level of their research productivity. Strategic planning and support from the school through the developed standard school support program is encouraged.

Keywords: *Competence, Productivity, Research engagement, Research readiness, Supportive environment*

Introduction

Several teachers nowadays have been engaged in conducting research, thus, apparently shaping their abilities to solve educational problems and continuously giving quality education to learners.

The predominant goal of this paper is to create a strong mechanism that will elevate the interest of the teachers to conduct school-based research, particularly an action research.

The disciplined step-by-step inquiry process in an action research cycle that can potentially produce continuous improvement in teaching practice that improves teachers' knowledge on teaching and learning.

This step-by-step process includes establishing the research problem, reading the relevant literature, crafting the research question, setting up the research design, collecting data, discovering the findings, and sharing the findings with the teaching community.

When action research is done collectively with teachers sharing like-minded concerns and issues, the benefits extend to include emotional support (Elliott, 1991) and knowledge construction (McGee, 2008).

Characteristically, Teacher's complaints regarding student behavior, professional development of teachers, classroom challenges and many others, but teacher view all these challenges as problems of the school, of the school head or even the Department of Education or the institution they are working with, and it is not their concern anymore.

Notwithstanding the debate, teachers play a vital role in developing the learners' knowledge and honing to become holistically inclined citizens of society.

However, the Department of Education, through DepEd Order No. 39 s. 2016 known as the Basic Research Agenda, guided DepEd and its stakeholders in conducting education research and utilizing research results to inform the Department's planning, policy, and program development aligned with its vision, mission, and core values.

Hence, the researcher was prompted to conduct this research to improve and enhance the interest of educators and encourage more teachers to become research-based decision-makers in a research-driven environment.

In this innovative program should be intended to train and help educators to enhance teachers and school heads in their abilities to conduct research and to dismantle the pessimism of cascading the culture of research because several studies found that this perception was rooted in poor foundation and unpreparedness in writing research, particularly action research.

This policy on development program on research will be the offshoot of the programs CARED (Consultation on Action Research Development and Enhancement) at San Jose National High School and ARCH (Action Research Consultation Hour) at San Vicente Integrated High School, where the researcher is presently the principal in first mentioned school and previous principal from the latter mentioned school.

The result of this study can be used to highlight strengthening the foundation of teachers

and school heads in writing action research to encourage them to become research-based decision-makers towards the cascading research culture in the Division of San Pablo City.

Objectives of the Study

The study's main objective is to develop a standard school support program to enhance the implemented basic research program at San Jose National High School. It specifically determined the teachers' level of readiness in research in terms of Knowledge in Research, Teacher Behavior/Attitude, Awareness in the conduct of Research, Economic /Social Status, Teaching Load, Ancillary Functions of Teacher, Learning Resources, and Research Intervention Program. Also, the extent of the perceived supportive environment on the level of research competency of teachers in terms of Research Culture, Leadership Skills of the Principal, School support and assistance, and Cognitive Ability of the Teacher was determined.

The study also looked into the perceived level of Research Writing skills of the teachers in terms of Problem Conceptualization (identifying the problem), Review of Related Literature, Choosing the Study Design, Content of the Study, and Collection and Interpretation of Data. Moreover, the Level of Productivity of teachers in conducting research in terms of the number of completed research work, number of research presented, and number of research accepted were identified as well.

Further, the relationship between the teachers' level of productivity in research and the perceived level of the teachers' readiness to conduct research, and the effect of school factors; the teacher's readiness in doing research and the supportive learning environment, skills in writing research, and research productivity; and the supportive learning environment and the skills in research writing, and research productivity were all tested.

This study further determined whether the perceived level of supportive environment significantly mediate the relationship between teacher's level of readiness and the skills in writing research, and research productivity.

Methods

This chapter presents the research design, participants of the study, instrument, data-gathering procedure and data analysis.

Research Design

The descriptive research design was used in the study. It was applied in the description of the teachers' level of readiness in research, the extent to which the School Factors affect the teachers' participation in research, the Level of Competency of teachers in conducting research, and the perceived level of Research Writing skills of the teachers.

Also, it was employed in describing the relationship between the teachers' level of readiness in research and the teachers' level of competency of teachers in conducting research and the teachers' perceived level of Research Writing skills, as well as the relationship between the extent to which the School Factors affect the teachers' participation in research and the teachers' level of competency of teachers in conducting research and the teachers' perceived level of Research Writing skills. Likewise, it was used in describing the mediating effect of the schools' supportive environment on the teachers' research readiness and the level of their research competency and research productivity.

Respondents of the Study

The Division of San Pablo City, a DepEd-managed division in San Pablo City, served as the study's location. This division includes the ALS program, Senior High School, Junior High School, and Elementary. The population studied consisted of all active teachers in the department for the school year 2022–2023, regardless of age, educational background, or civil status. The study's respondents were the six hundred sixty one (661) teachers who were chosen randomly. For ethical considerations, teacher-respondents were informed about the study and its purpose, that their participation is voluntary and that all their data were treated with high confidentiality.

Research Instrument

A researcher-made questionnaire was the main instrument of the study. It was consisted of four parts, namely:

Part I – The Teachers' Level of Readiness in Research; Part II - The Extent of the Effect of the School Factors on the Teachers' Participation in Research; Part III – The Extent of the Effect of Supportive Environment to the Level of Research Competency of Teachers; Part IV - The Perceived Level of Research Writing skills of the Teachers; and Part V – The perceived level of research productivity of the Teachers.

It was checked and validated by three external validators who were in the field of school management and research experts. Pilot study was conducted to three public schools in the Division of San Pablo City involving 30 respondents to test its reliability and was measured using the Cronbach's Alpha.

Research Procedure

A letter of permission to conduct the study (Appendix A) was forwarded to the office of the Schools Division Superintendent of the Division of San Pablo City. Upon the approval, it was then endorsed to the Public Schools District Supervisors (PSDS) handling the Cluster I and II of the Secondary Schools. School Heads were then notified by the PSDS through second endorsement. The researcher then distributed the questionnaire to the teacher respondents through google forms.

Statistical Treatment

To determine the Teachers' Level of Readiness in Research, The Extent of the Effect of the School Factors on the Teachers' Participation in Research, The Level of Competency of Teachers in Conducting Research, and The Perceived Level of Research Writing skills of the Teachers, mean scores and standard deviation were utilized.

The Pearson Product Moment Correlation was used to establish whether or not the relationship between the teachers' level of readiness in research and the teachers' level of competency in conducting research, and the teachers' perceived level of Research Writing skills is significant or not. This was also utilized to assess whether there is a significant relationship between the extent to which the School Factors affect the teachers' participation in research and the teachers' level of competency of teachers in conducting research, and the teachers' perceived level of Research Writing skills is significant or not.

Simple regression analysis was used to determine the association between the independent variable (teachers' research readiness) and the schools' supportive environment (mediating variable). Also, it was used to determine the relationship between the schools' supportive environment (mediating variable) and the level of teachers' research skills and research productivity (dependent variables). While, multiple regression analysis was used to test the mediation among the variable.

Results and Discussion

Table 1. Summary table of the teachers' level of readiness in research and extent of School Factors on the teachers' participation in research

Indicators	Mean	SD	VI
Knowledge in Research	3.01	0.7	High
Teacher Behavior/Attitude	3.12	0.6	High
Awareness in the conduct of Research	2.89	0.7	High
Economic /Social Status	2.62	0.7	High
Teaching Load	2.99	0.67	High
Ancillary Functions of Teacher	3.02	0.61	High
Learning Resources	2.86	0.68	High
Research Intervention Program	3.1	0.66	High
General Mean	**2.95**	**0.67**	**High**

Scale: 3.51-4.00 = Very High; 2.51-3.50 = High; 1.51-2.50 = Moderately High; 1.00-1.50 = Low

The summary of the teachers' level of readiness in research and extent of school factors in research participation is shown in table 10. It is exhibited that the teachers generally have "High" readiness in research as shown in the resulting general mean of 2.95 with a standard deviation of 0.67. It can also be seen that they have the highest level of readiness in terms of their attitude/behavior with a mean of 3.12. On the other hand, the economic readiness of teachers projected the lowest with a mean score of 2.62.

This means that the teachers have positive attitude/behavior towards research. Data also shows that the level of understanding of the teachers on the value of research to their professional development may be a barrier to their efforts to engage in research. Despite the difficulties and problems they encountered, many teacher-researchers nevertheless had a favorable opinion of the process of conducting research. The majority of them acknowledged that research can help them both professionally and personally.

Teacher participants had fewer favorable attitudes toward research, or "had a low level of interest in reading about research", which is emphasized as another factor impeding teachers' participation in research. Teachers see the relevance of research in their profession determines the limitations of teachers' awareness of and engagement on research. Teachers' unfavorable opinions about research were identified as one of the barriers to conducting research. As a result, having a negative attitude toward research is a significant barrier to teachers' research engagement.

Data further shows that the teachers still take into account the financial aspects of conducting research. Although the results shows that the teachers are all well equipped with the desired readiness needed to conduct research studies, the low economical capacity of the teachers to conduct research studies would significantly affect their research engagement. The lack of knowledge on where and how to gain funding for research poses as another barrier that may prevent teachers to fully engage with research.

Table 2. Summary table of the extent of perceived supportive environment on the level of research competency of teachers

Indicator	Mean	SD	VI
Research Culture	3.17	0.65	High
Leadership Skills of the Principal	3.24	0.65	High
School Support and Assistance	3.32	0.63	High
Cognitive Ability of the Teacher	3.02	0.63	High
General Mean	**3.19**	**0.64**	**High**

Scale: 3.51-4.00 = Very High; 2.51-3.50 = High; 1.51-2.50 = Moderately High; 1.00-1.50 = Low

The summary of the extent of perceived supportive environment on the level of research competency of teachers is shown in table 15. The perceived supportive environment specified generally have "High" effect on the level of research competency of teachers as shown in the resulting general mean of 3.19.

This means that the Research Culture, Leadership Skills of the Principal, School Support and Assistance, and Cognitive Ability of the Teacher highly contributes to the competency of teachers in doing research works.

Caingcoy (2020) dissected the findings on the research capability of teachers. Teachers are highly knowledgeable about the knowledge and technical components of research capability (Cuntapay et al., 2014; Narag et al., 2016), have a high level of competence in a variety of research activities, and have a high degree of research capability (Enero et al., 2017).

Table 3. Distribution of Completed Research Work

	SCHOOL-BASED				DIVISION				INTERNATIONAL			
	Solo		Co-author		Solo		Co-author		Solo		Co-author	
	F	%	F	%	F	%	F	%	F	%	F	%
0	412	62	419	63	473	72	461	70	526	80	544	82
1	103	16	124	19	80	12	96	15	41	6	39	6
2	49	7	36	5	37	6	32	5	35	5	23	3
3	39	6	36	5	30	5	32	5	22	3	24	4
4	32	5	28	4	23	3	27	4	23	3	21	3
5	24	4	17	3	17	3	12	2	13	2	9	1
Total	**660**	**100**	**660**	**100**	**660**	**100**	**660**	**100**	**660**	**100**	**660**	**100**

In the international level, majority of them, whether they were co-authors or not, were unable to finish a research study with 526 (sole author) and 544 (co-author) teachers comprising 80% and 82% of the total respondents, respectively. The same was observed for the division and international levels. However, it can be gleaned from the table that a significant number of respondents were still able to complete a research work in various levels with one the highest in the school based having a total of 38% for sole authorship and 37% for co-authorship.

Phoung, et.al (2017) stated that various factors have prevented teachers from involving in as well as conducting research activities. In fact, according to Bullo et.al (2021) on top of the regular teaching load of teachers, conducting research is a difficult task for teachers. They found that lack of time and difficulty in writing and conducting research were among the challenges why teachers perceived research as an additional burden, thus cannot complete one.

Table 4. Distribution of Research Presented

	TRAININGS/SEMINAR				DIVISION				NATIONAL				INTERNATIONAL			
	Solo		Co-author		Solo		Co-author		Solo		Co-author		Solo		Co-author	
	F	%	F	%	F	%	F	%	F	%	F	%	F	%	F	%
0	483	73	493	75	492	75	480	73	524	79	549	83	536	81	545	83
1	55	8	65	10	68	10	76	12	40	6	30	5	44	7	42	6
2	38	6	25	4	30	5	31	5	32	5	20	3	22	3	23	3
3	34	5	31	5	32	5	31	5	32	5	26	4	27	4	21	3
4	27	4	29	4	21	3	29	4	18	3	25	4	25	4	21	3
5	23	3	17	3	17	3	13	2	14	2	10	2	6	1	8	1
Total	**660**	**100**	**660**	**100**	**660**	**100**	**660**	**100**	**660**	**100**	**660**	**100**	**660**	**100**	**660**	**100**

A significant number of respondents have pronounced of not presenting their research works even in the international level (solo = 81%, co-author = 83%) and even in trainings/seminars (solo = 73%, co-author = 75%). This suggests that teachers were unable to present their research findings in research conferences or forums as the majority of them were unable to do so, even if they had already done so.

This may be attributed to the financial demand of presenting a research in private international forums that demands registration fees for participants/presenters. According to Elliot (1991) school teachers also have to face economic matters in conducting and presenting researches. Phoung, et al. (2021) remarked that teachers are not being compensated for their supplemental research time. Similar to this, the majority of teachers felt that they lack awareness of financing resources, which was listed as one of the barriers to teachers' engagement in research in their online survey. They gripe about not having enough access to financial assistance.

Table 5. Distribution of research Published

	ONLINE				DIVISION			
	Solo		Co-author		Solo		Co-author	
	F	%	F	%	F	%	F	%
0	519	79	536	81	552	84	536	81
1	57	9	41	6	30	5	39	6
2	29	4	30	5	30	5	29	4
3	23	3	23	3	21	3	27	4
4	21	3	21	3	17	3	20	3
5	11	2	9	1	10	2	9	1
Total	**660**	**100**	**660**	**100**	**660**	**100**	**660**	**100**

The findings show that almost all of them were unsuccessful in getting their studies published. As can be seen, there were much fewer published manuscripts by teachers in division level publishing than in online publishing (552 or 84% for lone authorship, and 536 or 81% for co-authorship). This suggests that the majority of the teacher respondents were unable to make their study materials accessible to other researchers.

Several factors can cause this low turn out and one of them can be the undertaking on the ethic and rules of publication. The primary difficulties in publishing research journal articles are those associated with determining and accepting authorship responsibility, overwork and low motivation among reviewers, the occurrence of "fake reviewers," co-existing publishing models ranging from open access to "predatory publishing," mandated research (statistical) approaches, plagiarism, necessary regulations and proclamations (disclosures), including for unethical behavior, and last but not least, issues, results, and problems (Hausmann, Murphy, 2016; Ajami, Movahedi, 2013).

Table 6. Summary table of perceived level of Research Writing skills of the teachers

Indicator	Mean	SD	VI
Problem Conceptualization (identifying the problem)	3.34	0.56	Satisfactory
Review of Related Literature	3.28	0.62	Satisfactory
Choosing the Study Design	3.37	0.64	Satisfactory
Content of the Study; and	3.28	0.64	Satisfactory
Collection and Interpretation of Data	3.28	0.64	Satisfactory
Over-all Mean	**3.31**	**0.62**	**Satisfactory**

Scale: 3.51-4.00 = Very Satisfactory; 2.51-3.50 = Satisfactory; 1.51-2.50 = Good; 1.00-1.50 = Needs Improvement

It can be seen that the teachers have the highest perceived level of research writing skill in choosing the study design (mean = 3.37). The over-all mean of 3.31 also signifies that they have "Satisfactory" research writing skill which is very crucial and helpful in producing a quality research paper. This further implies that the teachers were all well-versed in each of the parts of a research paper which can e attributed to several factors discussed in the preceding tables.

The overall mean, 3.31, is typically considered to be in the lower range of capability. This merely serves to highlight the reality that teachers, despite possessing a "satisfactory" level of expertise, nevertheless have room for improvement. The item with the greatest weighted mean, choosing the study design (3.37 mean or Satisfactory), is item number 3. Choosing the study design is a crucial step in doing research, as seen in the Cycle of Inquiry. A carefully thought-out research design helps to guarantee that the techniques are in line with the research objectives, that high-quality data can be obtained, and that the appropriate type of analysis to address the questions using reliable sources is applied (www.scribbr.com, 2023). This enables a researcher to reach reliable, accurate findings.

Moreover, three indicators were found to have the lowest mean as assessed by the respondents. Review of related Literature, Content of the Study, and Collection and Interpretation of Data all obtained a mean score of 3.28. This implies that teachers, were skilled the least when it comes to writing the body of the study and in mathematically dealing and interpreting the obtained research data.

Finding adequate numbers of relevant studies is one challenge in writing the literature review. How to organize the document, for example, chronologically or topically, is another issue, though it's not really a "challenge." Teachers were less competent in choosing the tools for data analysis and interpretation, encoding, and interpreting quantitative data in software. Writing, collecting, and analyzing data was time-consuming.

Teacher-researchers must be given the tools they need to be effective contributors to the creation of egalitarian, inspiring, and high-quality educational systems (Dalwampo, 2017; and Vaughan and Burnaford,2016).

Table 7. Correlation between the Teachers' level of skills in research and perceived level of the teachers' readiness to conduct research and the effect of school factors

		Research Writing Skills				
		Problem Conceptualization (identifying the problem)	Review of Related Literature	Choosing the Study Design	Content of the Study	Collection and Interpretation of Data
Teacher readiness in research	Knowledge in Research	.398**	.424**	.415**	.419**	.418**
	Teacher Behavior/Attitude	.468**	.505**	.518**	.507**	.504**
	Awareness in the conduct of Research	.449**	.484**	.470**	.472**	.471**
	Economic /Social Status	.409**	.446**	.424**	.406**	.417**
School factors (challenges)	Teaching Load	.495**	.461**	.448**	.439**	.434**
	Ancillary Functions of Teacher	.473**	.447**	.416**	.401**	.407**
	Learning Resources	.501**	.505**	.465**	.464**	.464**
	Research Intervention Program	.522**	.547**	.504**	.493**	.481**

***. 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*

The aforementioned findings thus reinforced the necessity to assess teachers' research skills to determine which of these needs to be enhanced and exposed to skill-building activities. Public teachers experienced a moderate level of difficulty on several parts of action research, are somewhat supported by the results of the present study (Morales, et.al, 2016). More consideration and prompt action are required in response to the challenges faced by participants in various research methods. Nevertheless, it is important to note that teachers have the desired level of competence when it comes to research writing which may be attributed to their continued professional development as teachers. Teachers are increasingly seeking out further education to better their education as a result of the Kto12 curriculum. Today's teachers have more experience writing theses and dissertations thanks to their master's and doctorate studies. These enable teachers to demonstrate some proficiency in the majority of research skills.

As revealed, the teacher's behavior/attitude towards research has a moderate, positive, and significant relationship with their kills in writing the literature review (r=.505, p<0.05), choosing the research design (r=.518, p<0.05), writing the content of the study (r=.507, p<0.05), and collection and interpretation of data (r=.504, p<0.05). While all other variables posed a low, positive, and significant association with each other.

It can also be gleaned that as school-related factors is significantly linked to the teachers' research competency. Specifically, the learning resources projected a moderate, positive significant relationship between both problem conceptualization (r = .501, p < 0.05) and writing the review of related literature (r = .505, p < 0.05). Similarly, the research intervention programs implemented in the school established a moderate, positive significant relationship with the teachers' level of competency in problem conceptualization (r = .522, p < 0.05), writing the literature review (r = .547, p < 0.05), and choosing the study design (r = .504, p < 0.05). While all other school factor variables showed a low, positive significant connection with the research skills of teachers.

Table 8. Correlation between the extent of school factors affecting participation in the conduct of research and the challenges in conducting research, level of research productivity, and level of research skills

		Research Writing Skills					**Overall Productivity**
		Problem Conceptualization (identifying the problem)	Review of Related Literature	Choosing the Study Design	Content of the Study; and	Collection and Interpretation of Data	
Supportive Environment	Research Culture	.506**	.553**	.514**	.511**	.504**	.165**
	Leadership Skills of the Principal	.545**	.563**	.529**	.506**	.500**	.147**
	School support and assistance	.522**	.512**	.478**	.460**	.455**	.172**
	Cognitive Ability of the Teacher	.522**	.512**	.478**	.460**	.455**	.172**

***. 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*

This suggests that a major determinant in teachers' ability to build their research writing skills is their own readiness. This was asserted by Wong's (2019) findings, that teachers' attitudes toward and knowledge of research can be used to explain their research capability.

Moreover, since a thorough reading of each source is required for a competent literature review in order to identify its major concepts and to examine it independently of other sources, the results asserts that it is imperative that educational institutions must guarantee the availability of resources for teachers to employ in conducting research investigations, including books, articles, and other references. Additionally, tasks for the teachers must be well-planned and reasonable so as not to interfere with their ability to participate and engage in research investigations.

Each of the indicators for the level of supportive environment in conducting research were significantly related to each of the research writing competency indicators of the teachers at 0.01 level of significance.

Though, it can also be gleaned that only School Support and Assistance projected a low, positive significant relationship with choosing research design ($r = .478$, $p < 0.05$), content of the study ($r = .460$, $p < 0.05$), and collection and interpretation of data ($r = .455$, $p < 0.05$).

Likewise, the cognitive ability of the teacher displayed a low, positive association with the same research writing skill variables ($r = .478$, .460, and .455, respectively). While all other variables exhibited a moderate, positive relationship with each other.

This shows that the supportive environment variables such as Research Culture and the Leadership Skills of the Principal directly determines the level of competence of teachers when it comes to research writing.

Furthermore, the results show that teachers' research output and skills will increase as a result of the school's increased support for their efforts.

Analysis also shows that all the supportive environment variables had a significant negligible effect on the teachers' research productivity. This demonstrates that a teacher's research productivity may be influenced by various influencing factors and that their school's supportive atmosphere does not correspond with their productivity as a researcher.

This further indicates that school-related factors are extremely important to teacher's productivity as researchers. These variables play a role in their involvement and engagement with research; thus, they must be heavily taken into account when designing educational projects and programs. Additionally, it is important to develop teachers' general research expertise, which will contribute to the creation of a research-based school.

Table 9. Correlation between teacher's level of readiness and the level of research skills as mediated by the perceived level of supportive environment

Mediating effect of supportive environment on the TRR and SRW						
	Coeff	SE	t	p	LLCI	ULCI
TRR - SE	0.712	0.0316	22.50	0	0.6499	0.7741
SE - SRW	0.3371	0.0418	8.06	0	0.255	0.4192
TRR - SE - SRW	0.24	0.0389			0.1667	0.3196
Direct	0.4431	0.0452	9.81	0	0.3544	0.5318
Indirect	0.24	0.0389			0.1667	0.3196
Total	0.6831	0.0356	19.21	0	0.6133	0.7529

Model Summary		
R	R-sq	P
0.6454	0.4166	0

The results reveal that the teachers' research readiness has a positive impact and positively predicts their level of research writing skills (coeff = 0.4431, p = 0.000). This means that the research writing skills of the teachers increase by 44.31% as the teachers' level of research readiness increases by one unit and the supportive environment variables remain unaltered.

This direct association indicates that the readiness of teachers in research has a significant effect on their research writing skills without considering the effect of the supportive environment (mediating factor).

Similarly, the analysis shows that the teachers' research readiness is positively associated with the schools' supportive environment and that this impact is significant (coeff = 0.7120, p = 0.000). Further, the test of mediation showed that both the teachers' research readiness (coeff = 0.2400) and schools' supportive environment (coeff = 0.3371, p = 0.000) predicted the teachers' level of research writing skills. This means that the research writing skills of the teachers increase by 24% as the schools' supportive environment increases by 71.20% and the teachers' level in research readiness remains constant.

This indirect effect demonstrates that, given their current level of research preparedness, teachers' motivation and ability to develop their research writing skills are positively influenced by the supportive environment of their schools.

The independent variable and the mediator accounted for 68.31% of the variance in the level of research writing skills. Since both the teachers' research readiness and the schools' supportive environment showed a significant association with the teachers' level of research writing skills, then the results establish a partial mediation among the variables.

Results indicate that there is not only a significant relationship between the schools' supportive environment and the teachers' research writing skills, but also some direct relationship between the level of teachers' readiness in research and their research writing skills.

Table 10. Correlation between teacher's research productivity and the level of research skills as mediated by the perceived level of supportive environment

Mediating effect of supportive environment on the TRR and PRODUCTIVITY

	Coeff	SE	t	p	LLCI	ULCI
TRR - SE	0.71	0.03	22.49	0	0.65	0.77
SE - PROD	-1.69	2.56	-0.66	0.51	-6.71	3.33
TRR - SE - PROD	-1.20	1.46			-4.22	1.60
Direct	20.12	2.76	7.29	0	14.70	25.55
Indirect	-1.21	1.46			-4.22	1.60
Total	18.92	2.08	9.11	0	14.84	22.99

Model Summary		
R	R-sq	P
0.3357	0.1127	0

The results reveal that the teachers' research readiness has a positive impact and positively predicts their research productivity (coeff = 20.1236, p = 0.000).

This direct correlation shows that the readiness of teachers in research has a significant effect on their research productivity without considering the effect of the supportive environment (mediating factor).

Similarly, the study confirms that the teachers' research readiness is positively linked with the schools' supportive environment (coeff = 0.7120, p = 0.000). Additionally, the test of mediation exhibited that both the teachers' research readiness (coeff = -1.2047) and the schools' supportive environment (coeff = -1.6919, p = 0.5084) is negatively associated with the teachers' research productivity. This means that the research productivity of the teachers decreases as the schools' supportive environment decreases and the teachers' level in research readiness remains constant.

The independent variable and the mediator accounted for 11.27% of the variance in the teachers' research productivity. Subsequently, only the teachers' research readiness displayed a significant impact on the research productivity, thus, the study establishes no mediation among the variables.

Analysis reveals that the teachers' research productivity is unaffected by the supporting environment at their institutions. As a result, there is a direct, non-mediating effect. This further implies that the productivity of teachers in terms of research is solely dependent upon their level of research readiness.

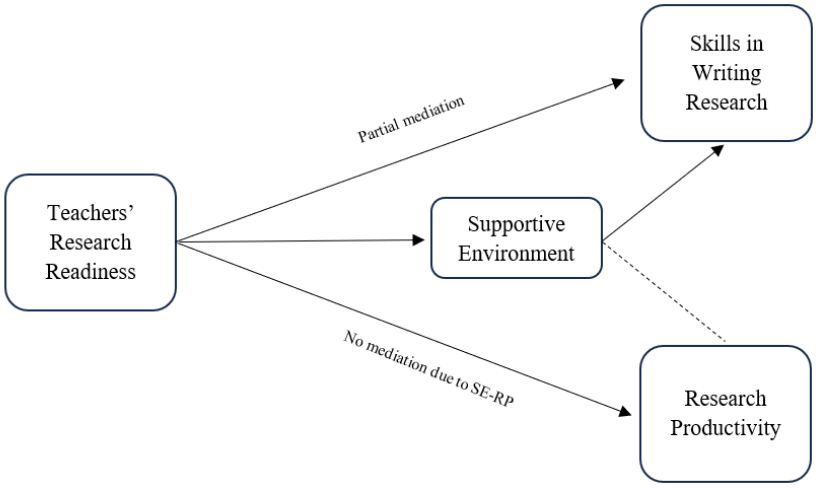

Fig. 1. A Proposed Model of Supportive Environment as Mediator of Teacher's Research Readiness to Skills in Writing Research and Research Productivity

Conclusion

Based on the findings, the following conclusions were drawn:

1. Teachers are all well equipped with the desired readiness needed to conduct research studies. However, although they have positive attitude/behavior towards research still takes into account the financial aspects of conducting one.
2. School-related factors are very important in influencing teachers' engagement in research investigations. The school's responsive intervention programs, readily available materials for reference, and strategically designed and manageable teaching loads all have a significant impact on the desire of teachers to conduct research. Additionally, the workload that teachers are given as well as the time commitment required for their supplementary duties have a negative impact on their interest and propensity for research.
3. Teacher's ability to do research projects is greatly influenced by their cognitive ability, the school's support and assistance, the principal's leadership skills, and the research culture at their institution. Teachers can increase their abilities to involve themselves in research and other relevant

activities through the assistance provided by the school and the school administrator.
4. The teachers were all well-versed in each of the parts of a research paper. They have the basic knowledge necessary in conducting a research study and in writing one.
5. There is a significant relationship between the teachers' level of competency in research and the perceived level of the teachers' readiness to conduct research; and the effect of school factors. Thus,
6. There is a significant relationship between the extent of school factors affecting participation in the conduct of research and challenges in conducting research; level of research productivity; and level of research skills.
7. The level of supportive environment significantly mediate the relationship between the teachers' level of research readiness and level of teachers' research skills but does not significantly mediate the teachers' level of research readiness and level of their research productivity.

Recommendations

Based on the findings and conclusions, the researcher formulates the following recommendations:

1. School heads and/or administrator are encouraged to strategically plan teaching load, availability of resources for reference, and the responsive intervention programs of the school as it greatly impacts the willingness of teachers to conduct research. Additionally, the amount of work assigned to teachers and the work demand of their ancillary functions must be manage for it negatively affects the teacher's enthusiasm and inclination to research.
2. Endorsement of the developed standard school support program to enhance the implemented basic research program to the Research and Planning Unit of the Division SGOD is suggested for possible utilization and/or contextualization of the program.
3. Other researches may conduct a quasi-experimental study on the effectiveness of the developed standard school support program to enhance the implemented basic research program.

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